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PATENT SECRECY ORDERS: THE UNCONSTITUTIONALITY OF INTERFERENCE IN CIVILIAN CRYPTOGRAPHY UNDER PRESENT PROCEDURES

Lee Ann Gilbert*

I. INTRODUCTION

This Article examines government interference with research through the issuance of secrecy orders on patent applications. Such interferences have historically been at the rate of two to three hundred per year; however, the number of secrecy orders issued annually appears to be declining.¹ Foreign patent applications account for roughly one quarter of the applications placed under secrecy orders. Of the remaining patent applications which are placed under secrecy orders, only one-fifth are for non-government funded inventions. Thus, roughly fifteen percent of all secrecy orders are issued on patent applications from domestic sources for privately funded inventions.²

A secrecy order is an order to freeze the examination of a patent application which is issued by the Commissioner of Patents under the authority of the Secrecy Order Statute.³

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1. 292 secrecy orders were issued in 1978, followed by 241 in 1979. Sanders, *Data Privacy: What Washington Doesn't Want You To Know*, REASON, 25, 35 (Jan. 1981); H.R. REP. No. 1540, 96th Cong., 2d Sess. 17-18 (1980) (hereinafter REPORT); *The Classification of Private Ideas: Hearings Before the Subcomm. of the House Committee on Government Operations*, 96th Cong., 2d Sess. (Feb. 28, March 20, and Aug. 21, 1980) (Testimony of Rene D. Tegtmeier) at 2 (hereinafter *Hearings*).

2. Sanders, *supra* note 1, at 25, 35. This 15% figure was derived from two years of data, but it is indicative of the current trend.

3. 35 U.S.C. § 181 (1976). The Secrecy Order Statute is one section of the Invention Secrecy Act. See *infra* note 7. The Secrecy Order Statute provides:

Whenever publication or disclosure by the grant of a patent on an invention in which the Government has a property interest might, in the opinion of the head of the interested Government agency, be detrimen-

The order often causes a patent to be temporarily withheld, and further requires that the invention be kept secret. The

tal to the national security, the Commissioner upon being so notified shall order that the invention be kept secret and shall withhold the grant of a patent therefor under the conditions set forth hereinafter.

Whenever the publication or disclosure of an invention by the granting of a patent, in which the Government does not have a property interest, might, in the opinion of the Commissioner, be detrimental to the national security, he shall make the application for patent in which such invention is disclosed available for inspection to the Atomic Energy Commission, the Secretary of Defense, and the chief officer of any other department or agency of the Government designated by the President as a defense agency of the United States.

Each individual to whom the application is disclosed shall sign a dated acknowledgement thereof, which acknowledgement shall be entered in the file of the application. If, in the opinion of the Atomic Energy Commission, the Secretary of a Defense Department, or the chief officer of another department or agency so designated, the publication or disclosure of the invention by the granting of a patent therefor would be detrimental to the national security, the Atomic Energy Commission, the Secretary of a Defense Department, or such other chief officer shall notify the Commissioner and the Commissioner shall order that the invention be kept secret and shall withhold the grant of a patent for such period as the national interest requires, and notify the applicant thereof. Upon proper showing by the head of the department or agency who caused the secrecy order to be issued that the examination of the application might jeopardize the national interest, the Commissioner shall thereupon maintain the application in a sealed condition and notify the applicant thereof. The owner of an application which has been placed under a secrecy order shall have a right to appeal from the order to the Secretary of Commerce under rules prescribed by him.

An invention shall not be ordered kept secret and the grant of a patent withheld for a period of more than one year. The Commissioner shall renew the order at the end thereof, or at the end of any renewal period, for additional periods of one year upon notification by the head of the department or the chief officer of the agency who caused the order to be issued that an affirmative determination has been made that the national interest continues so to require. An order in effect, or issued, during a time when the United States is at war, shall remain in effect for the duration of hostilities and one year following cessation of hostilities. An order in effect, or issued, during a national emergency declared by the President shall remain in effect for the duration of the national emergency and six months thereafter. The Commissioner may rescind any order upon notification by the heads of the department and the chief officers of the agencies who caused the order to be issued that the publication or disclosure of the invention is no longer deemed detrimental to the national security.

Chapter 17 of the Patent Act of 1952, 66 Stat. 805 (codified at 35 U.S.C. §§ 181-188 (1976)) is itself sometimes referred to as the Invention Secrecy Act because it was based on the Invention Secrecy Act of 1951. *Constant v. United States*, 617 F.2d 239 n.1 (1980).

statute authorizes penal sanctions for violations of an order.⁴

During the past four years, the government's conduct has indicated a strong interest in the blossoming field of civilian data security technology. Government agencies have characterized their conduct in terms of efforts to control a civilian's ability to decipher secret codes or create unbreakable ones. Three specific instances of government interference are evidence of this new interest in civilian cryptography.⁵ Of these three instances, two involve secrecy orders issued on patent applications, one of which was issued on a privately funded invention.⁶

4. *Id.*

5. For the purposes of this paper, "civilian cryptography" means code-making and code-breaking by people who are neither government employees nor employees of government contractors. The prototype of a civilian cryptographer is the inventor who invests his own time, money and materials to develop his invention, or to carry on cryptography. Another instance of civilian cryptography is the university researcher, either a professor, a graduate student or an employee of the university, whose work is sponsored by the university without government funding. The university researcher whose work is funded by the National Science Foundation (NSF) presents a hybrid case. Whether the publicly funded researcher's work is "civilian" or governmental depends on whether funding is viewed as "public" or as government.

42 U.S.C. § 1870(e) (1976) allows the NSF to acquire patent ownership or rights by purchase, lease, loan, gift or condemnation. The NSF exercises this right by providing, in its loan, grant, or fellowship award contract a clause which vests at least: (1) a nonexclusive, nontransferrable, paid-up license to make, use, and sell the invention; (2) the right to sublicense to any foreign government pursuant to treaty requirements; (3) the principal or exclusive rights to the invention, or rights to acquire the same, in any country in which the patentee does not elect to secure a patent; and (4) the right to require the granting of licenses to certain persons. 45 C.F.R. §§ 650.1-650.10 (1979). It is important to notice that the major objective of the NSF is to encourage availability of inventions to the public which arise from NSF-sponsored activities. *Id.* at § 650.11 (a). Therefore, NSF funding, while literally government funding, has a purpose which is more oriented to the public than government contracts. Where the NSF award contract includes the proper terms, however, the NSF may take the resultant invention by eminent domain. Therefore, the purpose of the funding is not always public.

6. Kahn, *Cryptology Goes Public*, 58 FOREIGN AFF. 141, 154-56 (1979). Kahn, a journalist and author of scholarly historical studies of military uses of cryptography, reported three specific instances of recent government interference in civilian data security cryptology.

The first involved a letter written by a National Security Agency (NSA) employee, J. A. Meyer, to the Institute of Electrical and Electronics Engineers (IEEE) which warned that the Institute's upcoming conference to be held at Cornell University in October 1977, and the articles on cryptology that the IEEE had published might be in violation of the International Traffic in Arms Regulations (ITAR). See 22 C.F.R. §§ 121-28 (1979). These regulations applied to "speech scramblers, privacy devices, cryptographic devices," and "technical data" of certain defined types on the United States Munitions List. The President controls the import and export of the devices and data. *Id.* § 121.01, Categories XIII(b) and XVIII; § 123.38, § 125.11. How-

On April 21, 1978, the Commissioner of Patents, on the advice of the National Security Agency (NSA), issued a secrecy order on an application for a patent on a "Phasorphone," a voice scrambling device. The device was designed by four west coast men and originally was designed to allow telephone users to talk without being overheard by electronic eavesdroppers. This secrecy order was issued near the end of the six month period during which the government may review an application for national security problems. If no secrecy order had issued, these inventors would have been able to apply for, without first securing a license, foreign patents at the end of the six month period.⁷ However, the order was issued, and the inventors took their plight to the media, charging violations of privacy, free speech, and due process. After repeated attempts at negotiations between the inventors and the various administrative agencies, the NSA allowed the Patent Office to lift the secrecy order on October 11, 1978. The application process was resumed, and a patent, number 4,188,580, was issued on February 12, 1980.⁸

The "Phasorphone" inventors experienced the problems inherent in current procedures. They were forced to operate

ever, James D. Hathaway, Deputy Director of the Office of Munitions Control at the State Department, commented that Meyer's interpretation of the applicability of ITAR to the conference and the conference papers "sounded inaccurate." Shapely & Kolata, *Cryptology: Scientists Puzzled Over Threat to Open Research Publication*, 197 Sci. 1345, 1348 (1977).

Another episode involved a patent on a cipher device, applied for by Dr. George I. Davida, professor of electrical engineering and computer science at the University of Wisconsin, at Milwaukee. The cipher device provided a method of safeguarding computer data, using advanced mathematical techniques. The Commissioner of Patents, on the advice of the NSA, issued a secrecy order on the application on April 21, 1978. The order required that the invention be kept secret in the interest of national security. The University of Wisconsin's chancellor took the incident to the media, arguing that the secrecy order had "a chilling effect on academic freedom." See N.Y. Times, June 13, 1978, § A, at 16, col. 1. Admiral Inman, Director of the NSA, countered that seeking a patent was evidence of a profit motive rather than an interest in academic freedom. However, within seven weeks from the issuance, the Patent Office lifted the secrecy order without explanation. See New York Times, May 31, 1978, § A at 1, col. 1; Browne, *Cryptography Is Too Good for Anyone's Comfort*, N.Y. Times, June 4, 1978, § E, at 7, col. 2; N.Y. Times, June 13, 1978, § A, at 16, col. 1.

The same day on which the secrecy order was issued on Dr. Davida's invention, the Commissioner of Patents issued another secrecy order on an application for a patent on a "Phasorphone" voice scrambling device. See San Jose Mercury News, Feb. 17, 1980, § A, at 2, col. 2-4.

7. 35 U.S.C.A. §§ 184-85 (1976).

8. San Jose Mercury News, Feb. 17, 1980, § A, at 2, col. 2-4.

under a secrecy order for a period, they petitioned for a rescission of that order, and negotiated with the various agencies involved to have the order lifted. This article isolates the constitutional torts that a patent applicant might suffer under current procedures for issuance of a secrecy order. Generally, the secrecy order acts as a prior restraint on the applicant's first amendment freedom to publish. Such a prior restraint on publication has many indicia of a taking of private property for a public purpose which necessitates government compensation for the value of the property. Many applicants, however, are denied the right to seek such constitutionally mandated compensation, and thereby are denied their due process rights guaranteed by the fifth amendment.

After identifying the basic problems with the current statutes and rules, this article will discuss the various procedures for seeking review and redress. The article will then suggest proper interpretations of the existing laws to cure present anomalies, and propose amendments to the existing law and procedural rules. These proposals would make the laws and procedures consistent with the requirements of the Constitution and protect patent applicants from manipulation by various defense agencies.

II. THE INVENTION SECRECY ACT

A. *Background and Purpose*

The purpose of the patent system in the United States Constitution is to encourage individuals to expend time, energy, and resources in pursuit of technological progress.⁹ The general policy behind the patent system is to award a limited monopoly to the inventor in return for the full disclosure of his new, useful, and nonobvious discovery. There are two limitations to this general policy. First, an inventor may not receive a patent for public information. This restriction is implicit in the concept of invention, and has been broadly upheld by the courts.¹⁰ Nor will the government issue a pat-

9. U.S. CONST. art. I § 8, cl. 8. "The Congress shall have Power . . . To promote the Progress of Science and Useful arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."

10. *Anderson-Black Rock Inc. v. Pavement Salvage Co. Inc.*, 396 U.S. 57 (1969); *Graham v. John Deere*, 383 U.S. 1 (1966); *United States v. Adams*, 383 U.S. 39 (1966); *The Great Atlantic and Pacific Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147

ent on information which, if disclosed, would be detrimental to the national security. This second restriction was codified in the Invention Secrecy Act of 1951 (the Act).¹¹

A basic purpose of the Act was to allow the government, in times of peace, as well as in times of war, to prevent the dissemination of information contained in patent applications whenever the disclosure of such information would be detrimental to the national security.¹² In 1951, the focus of Congress and the Department of Defense was on "inventions useful in war,"¹³ but the current focus of the Department of Defense and other agencies is broader.¹⁴

The Secrecy Order Statute¹⁵ provides the mechanism for preventing this dissemination of information. The statute authorizes the Commissioner of Patents to issue secrecy orders when there is a threat to national security. The issuance of a secrecy order causes the patent to be withheld, sometimes causes the application to be sealed and examination of the application to cease, and orders that the invention remain secret under threat of criminal sanctions of a fine of up to \$10,000, or imprisonment up to two years, or both.¹⁶ The Patent Office can declare the patent abandoned if the terms of the secrecy order are violated.¹⁷

(1950); *Atlantic Works v. Brady*, 107 U.S. 192 (1882); *Hotchkiss v. Greenwood* 52 U.S. 248 (1850); *Lyon v. Bausch & Lomb Optical Co.*, 224 F.2d 530 (2d Cir. 1955).

11. Invention Secrecy Act of 1951, Pub. L. No. 82-256, 66 Stat. 3 (1951) (based on 35 U.S.C. §§ 151-158 (1946) (current version at 35 U.S.C. §§ 181-187 (1976) and 35 U.S.C.A. § 188 (West Supp. 1980)).

12. *Halpern v. United States*, 258 F.2d 36, 38 (2d Cir. 1958). See REPORT, *supra* note 1, at 57-61. Although the Act was passed during a time of national emergency, it was intended to apply in times of peace as well. The Subcommittee reviewing the Act reserved for future consideration the procedures that should apply in peacetime. *Id.* at 57.

13. S. REP. NO. 1001, 82nd Cong., 2d Sess. 1, reprinted in [1952] U.S. CODE CONG. & AD. NEWS 132, 1323-24. However, Congress expressed concern that inventions made in peacetime were equally important, because such inventions could be useful in war. *Id.* See REPORT, *supra* note 1, at 57-61.

14. REPORT, *supra* note 1, at 9. Current procedures allow continuation of a secrecy order, without justification, until it is revoked. This extends to applications which are not patentable.

15. See *supra* note 3.

16. 35 U.S.C. § 186 (1976).

17. 35 U.S.C. § 182 (1976).

B. *Mechanics of the Secrecy Order*

1. *Generally*

The Patent Office interprets the Act as obligating the Patent Office to recognize applications in which defense agencies will claim a national security interest, and to make such applications available to the defense agencies.¹⁸ If the government claims a property interest, the Patent Office will assume additional duties.

Where the government claims a property interest in an invention, the interested agency must notify the Commissioner of Patents that the invention should be kept secret.¹⁹ The government may claim a property interest under either the Atomic Energy Act (AEA)²⁰ or the National Aeronautics and Space Act (NASA).²¹ The Patent Office recognizes no other statutes as providing the basis for a government property interest.²² All patent applications are screened by the Patent Office security group, Group 220,²³ to determine which

18. UNITED STATES PATENT AND TRADEMARK OFFICE, *MANUAL OF PATENT EXAMINING PROCEDURE* §§ 107, 107.01 (3d perm. ed. rev. Oct. 1980).

19. *Id.*

20. 42 U.S.C. §§ 2011-2296 (1976).

21. 42 U.S.C. §§ 2457-58 (1976).

22. This conclusion is based on silence in the *MANUAL OF PATENT EXAMINING PROCEDURE* as to other statutory bases for a governmental property interest. Telephone interview with Samuel Engle, Patent Office Examiner for Art Unit 221 (Mar. 5, 1980). Mr. Engle is an examiner for Group 220.

23. See *MANUAL OF PATENT EXAMINING PROCEDURE*, *supra* note 18, at § 107.01. This section provides:

Under 35 U.S.C. 181 the obligation is directly on the Patent and Trademark Office to appreciate the possible interest of the defense agencies in pending applications and to take steps to make them available to such agencies.

All new applications received in the Patent and Trademark Office are screened by Group 220 personnel to determine which applications should be made available for review or treated under Atomic Energy and Space Acts for property interests.

....
All papers subsequently filed must be inspected by the examiner to determine whether matter of an obvious defense interest which requires a security review or matters of obvious property right interest under the Atomic Energy or Space Acts has been introduced into the application. In such applications forwarded to the Licensing and Review Section of Group 220, it is helpful if a check mark is placed in the margin opposite to the part which is significant in suggesting security review.

Applications in Group 220 for the review thereof by the appropriate defense agency may be borrowed by the examiner when reached for action. Allowable applications requiring consideration for processing under

applications require further review for property interests.

There are two classes of inventions that are subject to issuance of secrecy orders: (1) inventions in which the government has a property interest²⁴ and disclosure of which might be detrimental to the national security as determined by the head of an interested government agency, and (2) inventions in which the government does not have a property interest, but disclosure of which will be detrimental to the national security as determined by the head of a "defense agency"²⁵ of the United States. Thus, the Commissioner of Patents has a sufficient basis to issue a secrecy order if a defense agency believes that disclosure of the information in the application would be detrimental to the national security.

It is not necessary to determine whether the subject mat-

Section 152 of the Atomic Energy Act (42 U.S.C. § 2182) and/or Section 305 of the Space Act (42 U.S.C. § 2457c) are processed to issue, including counting of the issue, and forwarded through Group 220 to the office of Quality Review and Patent Issue Division. When the security status of the application cannot be promptly decided, Group 220 will report the progress that has been made to the group director. Any action to be taken in the case, for the purpose of advancing said group date, must be arranged through the group director.

24. *Id.*

25. Congress broadened the definition of a defense agency as it is used in 35 U.S.C. § 181. This term applies to "the Atomic Energy Commission, the Secretary of Defense, and the chief officer of any other department or agency of the Government designated by the President as a defense agency of the United States." *Id.*

Subsequent to enactment of 35 U.S.C. § 181, the Atomic Energy Commission was abolished. Energy Reorganization Act of 1974, Pub. L. No. 93-438, § 104, 88 Stat. 1237 (codified at 42 U.S.C. 5814 (1976)). The Energy Reorganization Act vested the Administrator of the Energy Research and Development Administration with all the functions of the Commission. *Id.* at § 104(c) (codified at 42 U.S.C. 5814 (1976)). Special presidential designations pursuant to this provision are published in the Federal Register. The Department of Justice has been designated as a defense agency by this procedure for purposes of 35 U.S.C. § 181. See EXECUTIVE ORDER No. 10,457, 18 Fed. Reg. 3,083 (1953). Although it claims no part in the procedure to review applications, the Department of Justice recommended issuance of secrecy orders on three occasions. See REPORT, *supra* note 1, at 14; *Hearings, supra* note 1, at 250 (Testimony of H. Miles Foy, Senior Attorney-Advisor, Department of Justice).

In 1977, the Department of Energy was established. Department of Energy Organization Act, Pub. L. No. 95-91 § 201 91 Stat. 569 (codified at 42 U.S.C. § 7131 (Supp. 1971)). Section 301 of the Act transferred the functions of the Administrator of the Energy Research and Development Administration. *Id.* at § 301 (codified at 42 U.S.C. 715) (Supp. 1979).

Although § 181 refers to the Atomic Energy Commissions, the functions of the Commission have been transferred to the Department of Energy. Thus, the Department of Energy is a "defense agency" for purposes of the Secrecy Order Statute.

ter of the application is patentable²⁶ prior to the issuance of a secrecy order. This question of patentability is generally determined during the application process. In order to be worthy of a patent, an invention must have a patentable subject matter²⁷ and be new, useful,²⁸ and nonobvious.²⁹ However, the Patent Office does not make any determinations concerning these patent requirements before a secrecy order is issued.³⁰ Therefore, an invention on which a secrecy order issues need not be patentable.

2. National Security

The key to the secrecy order procedure is a fear that the national security will be compromised. In the Invention Secrecy Act, Congress delegated the power to determine when to defend the national security to the heads of government agencies.³¹ Such a delegation is proper, provided Congress had the power originally. However, a problem arises when this power is delegated without sufficient guidelines.

Congress did not expressly define the term "national se-

26. The list of subjects which are within the statutory definitions of patentable subject matter is to be found in 35 U.S.C. § 101 (1976), as further defined in §§ 100, 171. Generally, however, one need only consider 35 U.S.C. §§ 100, 101, since the vast majority of patents sought are of the type called "utility" patents, defined therein. These sections provide:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

35 U.S.C. § 101 (1976).

When used in this title unless the context otherwise indicates—

(a) The term "invention" means invention or discovery.

(b) The term "process" means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

35 U.S.C. § 100 (1976).

27. 35 U.S.C. §§ 100, 101, 171 (1976).

28. 35 U.S.C. § 101 (1976). *See* *Beidler v. United States*, 253 U.S. 447, 453 (1920). The standard of utility is generally held to be "commercial utility" rather than "that a process produces the result intended and is not 'detrimental to the public interest.'" *Beidler v. U.S.*, 333 F.2d 234, 238 (CCPA, 1964).

29. 35 U.S.C. § 103 (1976). *See* *Graham v. John Deere*, 383 U.S. 1 (1966).

30. The Patent Office has issued secrecy orders on inventions that are *prima facie* not patentable, due to unpatentable subject matter. The defense agencies and the Patent Office view the secrecy order as a method for controlling information generally, not just patents. *REPORT*, *supra* note 1, at 42.

31. 35 U.S.C. § 181 (1976).

curity" in the Invention Secrecy Act. The Act reveals a congressional concern with war, hostilities, national emergencies, and foreign filing of United States patent applications. In each of these areas, foreign nationals are implicitly the entities who cannot be trusted with the information in the applications. The Senate Report of the 1951 Act is more narrowly focused on national defense and inventions useful in war.³² In addition, the Senate Report expresses a concern for classified information contained in patent applications.³³ However, because "national security" is not defined in the Act, the parameters of the term must be found in other federal statutes with related interests, or in other government documents.

The government classifies sensitive information in order to further national security. The Classification Order³⁴ defines the current hierarchy of classified information. The classification order defines national security as follows: "'National security' means the national defense and foreign relations of the United States."³⁵ This definition is consistent with national security as a function of the executive branch. The President, as the only representative of the nation as a whole, has inherent foreign affairs power.³⁶ Congressional delegation of foreign affairs powers to the President is subject to fewer restrictions than the delegation of such powers to another entity.³⁷ Where regulatory authority for foreign affairs is delegated to some entity other than the President, the United States Supreme Court requires that Congress define standards for applying the regulation.³⁸ The lack of guidelines in the Act indicating when information is detrimental to the national security allows the agencies to apply the secrecy order procedures indiscriminately.

Because delegations of foreign affairs powers to non-Pres-

32. S. REP. No. 1001 *supra* note 13.

33. *Id.* at 2-3.

34. Exec. Order No. 12,065, 43 Fed. Reg. 28,949 (1978).

35. *Id.* at 28,961.

36. *United States v. Curtiss-Wright Export Co.*, 299 U.S. 304, 319 (1936). *See also* S. REP. No. 1097, 90th Cong., 2nd Sess. 69, *reprinted in* 1968 U.S. CODE CONG. & AD. NEWS 2112, 2156-57.

37. *United States v. Curtiss-Wright Export Co.*, 299 U.S. 304, 319-29 (1936). *Kent v. Dulles*, 357 U.S. 116, 129 (1958). *See also* G. GUNTHER, CONSTITUTIONAL LAW 407 (10th ed. 1980).

38. *Kent v. Dulles*, 357 U.S. 116, 129 (1958); *Panama Refining Co. v. Ryan*, 293 U.S. 388, 420-30 (1935).

idential entities are more closely scrutinized, limitations on Congressional delegation of foreign affairs power to the President apply to similar delegations to federal agencies. Therefore, the admonitions of the Supreme Court in *United States v. United States District Court*³⁹ apply to delegations of foreign affairs power to federal agencies. In *United States v. United States District Court*, the United States Supreme Court considered the Presidential national security exceptions to Title III of the Omnibus Crime Control and Safe Streets Act.⁴⁰ The issue was whether the Presidential powers to protect national security are limited if individual rights guaranteed by the Constitution were violated. The Court found that the wiretap statute "does not attempt to define or delineate the powers of the President to meet domestic threats to the national security,"⁴¹ but that where only domestic aspects of national security are involved, the fourth amendment prior warrant requirement must be fulfilled. Pointing to the list of crimes specifically delineated in the wiretap statute,⁴² the Court concluded that even in federal crimes, such as espionage, which may involve either domestic or foreign security threats, the wiretap statute requires prior judicial approval of surveillance in the form of a warrant.⁴³ The Court held that activities threatening domestic security were insufficient grounds to deny constitutionally protected individual rights. However, the Court expressly chose not to voice an opinion on constitutionally protected rights where the activities threaten foreign security.⁴⁴

Therefore, federal agencies may not deny individual free-

39. 407 U.S. 297 (1972).

40. Pub. L. No. 90-351, 82 Stat. 212 (1968), codified at 18 U.S.C. §§ 2510-20 (1976). This Act allows certain people, under authority of the Attorney General, to seek court orders approving wiretaps and electronic surveillance of individuals in certain classes of activities, listed in 18 U.S.C. § 2516.

41. 407 U.S. at 322.

42. *Id.* at 321.

43. Congress has subsequently modified the warrant requirement in the case of surveillance, for the purpose of gathering intelligence about foreign powers to which no United States person is a party, in the Foreign Intelligence Surveillance Act, 50 U.S.C.A. §§ 1801-1811 (West Supp. 1979). This Act is very specific in its direction toward foreign powers and away from private United States people. *Id.* at § 1802 (a)(1)(A) and (B).

44. This bifurcation of government national security interests is also apparent in Executive Order No. 12,065 in its definition of national security. See also *United States v. Boyce*, 594 F.2d 1246, 1251 (9th Cir. 1979), quoting *Gorin v. United States*, 312 U.S. 19, 28 (1941); *Burkhart v. Saxbe*, 397 F. Supp. 499 (E.D. Pa. 1975).

doms protected by the constitution on the grounds of a threat to domestic security. The prerequisite for denial of individual constitutional rights is either a threat to a foreign national security interest or a warrant issued upon probable cause that a crime has been committed.

A federal regulatory scheme concerned with national security is the International Traffic on Arms Regulation (ITAR).⁴⁵ The purpose of ITAR is to regulate goods and information exported from the United States in order to further national security and national defense interests.⁴⁶ ITAR is administered by the State Department. Some information on which secrecy orders have been issued is also covered by ITAR where the information is to be exported or made available internationally.⁴⁷

Both ITAR and the Invention Secrecy Act require the licensing of information before the invention is exported, but neither includes standards for issuing or denying licenses. This lack of standards "sufficiently precise to guard against arbitrary and inconsistent administrative actions," is conceded to be a fundamental flaw in ITAR.⁴⁸ This article contends that the similar lack of precise standards for application of the Invention Secrecy Act poses serious problems as to the constitutionality of the Act.

45. 22 C.F.R. §§ 121-128 (1979). These rules governing foreign export of goods and knowledge have been strengthened by the passage in September 1979 of the Export Administration Act of 1979, Pub. L. No. 96-72, codified at 50 U.S.C. §§ 2401-2421 (Supp. 1979). This Act provides that new rules and regulations be printed in the Federal Register by October 1, 1980. The Department of Energy's list of military critical technologies retained an exception in category IX. See 45 Fed. Reg. 65167 (1980); REPORT, *supra* note 1, at 109.

46. 34 Fed. Reg. 12029 (1969).

47. See *supra* note 6. Only limited or restricted distribution information would be covered by ITAR, if published in some form, since materials available to the public are exempt from rules controlling exports. Shapely & Kolata, *Cryptology: Scientists Puzzle Over Threat to Open Research Publication*, 197 Sci. 1345, 1348 (1977); 22 C.F.R. § 125.11(a) (1979).

48. Memorandum prepared by Asst. Attorney General John Harmon (May 11, 1978). The memorandum concluded that "the existing provisions of the ITAR are unconstitutional insofar as they establish prior restraint on disclosure of cryptographic ideas and information developed by scientists and mathematicians in the private sector." See REPORT, *supra* note 1, at 26 n.48; *Hearings, supra* note 1, at 260-61; Sanders, *Data Privacy: What Washington Doesn't Want You To Know*, REASON 25, 37 (Jan. 1981).

3. *Classified Information*

The Secrecy Order Statute provides that the application shall be sealed where a proper showing is made, by the head of an agency, that a secrecy order should be issued on the patent application.⁴⁹ The Senate Report on the 1951 Act clarifies that this provision was added to handle patent applications containing information "which has been classified as secret," in lieu of prohibiting the filing of such an application.⁵⁰ Such classifications are made pursuant to the Classification Order. All other provisions of the Secrecy Order Statute apply to an application containing classified information, but only a classified application may be sealed.⁵¹ Information designated as classified under the Classification Order⁵² receives special treatment.

Discussing civilian research, the Classification Order states:

A product of non-government research and development that does not incorporate or reveal classified information to which the producer or developer was given prior access may not be classified under the Order until or unless the government acquires a proprietary interest in the product.⁵³

The Classification Order also provides that although "scientific or technological . . . matters relating to the national security"⁵⁴ are proper information for classification, "[b]asic scientific research information not clearly related to the national security may not be classified."⁵⁵ Implicit in these provisions is the assumption that information to be classified must meet some threshold. Areas in which government concern might be sufficient to warrant classification are listed in the Order.⁵⁶

49. 35 U.S.C. § 181 (1976). Neither the statute nor the rules of the various agencies define what a "proper" showing should be. REPORT, *supra* note 1, at 11. The consensus among agency personnel questioned by the Subcommittee is that the Commissioner of Patents is to use his discretion to determine when such a showing is "proper."

50. S. REP. NO. 1001, 82nd Cong., 1st Sess. 2 (1951), reprinted in U.S. CODE CONG. & AD. NEWS 1321, 1322 (1952).

51. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 18, at § 109.

52. Exec. Order No. 12,065, 43 Fed. Reg. 28,952 (1978).

53. *Id.*, § 1-603 at 28,953 (emphasis added).

54. *Id.*, § 1-301(e) at 28,951.

55. *Id.*, § 1-602 at 28,953.

56. *Id.*, § 1-301 at 28,951.

This list, however, includes a catch-all category which provides that the opinion of an agency head is sufficient justification.⁵⁷ Therefore, the determination by the head of a defense agency that information contained in a patent application would be detrimental to the national security is sufficient to classify the information according to the Classification Order. The same determination is used to classify the information is also sufficient to seal the application.

Despite the similarities between the Classification Order and the Secrecy Order Statute, there is an important difference in the language of the sections. Whereas the Secrecy Order Statute requires that the government have a "property" interest in the information contained in the patent application, the Classification Order requires that the government have a "proprietary" interest in the information.⁵⁸

4. *Property interest in a patent application*

After national security, the next key element is the property interest in the filed patent application. Property interest in an unpatented idea is important from two perspectives: government property interest in the invention, and the inventor's property interest in his idea. As will be discussed below, these two areas of interest are not mutually exclusive. The Secrecy Order Statute creates two classes of applications based on whether the government has a property right in the claimed invention.⁵⁹ According to the *Manual of Patent Examining Procedure*, the Patent Office reviews applications for government property interests only under the AEA and the NASA.⁶⁰ This fact implies that no other statutes are the bases for government property interests in patent applications.⁶¹

57. *Id.*

58. Of course, where the government has no property interest, a defense agency head may succeed in having a secrecy order issue based on his judgment that disclosure of the information would be detrimental to the national security. 35 U.S.C. § 181 (1976).

59. See notes 24 and 25 and accompanying text.

60. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 18, at § 107.01 (3d perm. ed. rev. 1974).

61. The differentiation between property and proprietary government interest is blurred by SENATE REPORT NO. 1001 which accompanies the Act. This document describes the government property interest as requiring less than full legal title. S. Rep. No. 1001, 82nd Cong., 1st Sess. 2, reprinted in U.S. CODE CONG. & AD. NEWS 1322 (1952); REPORT, *supra* note 1, at 8.

However, statutes reserving less than exclusive legal title to inventions, ideas, or information for the government can create a government proprietary interest in such inventions, ideas, or information.⁶² Whereas property contemplates exclusive legal rights to possess, enjoy, and dispose of something, proprietary contemplates legal rights that need be neither exclusive nor absolute.

The common characteristic of the second class of patent application is a lack of a government property right in the claimed invention. The government may have a proprietary interest supported by statute in some of the inventions in this class of applications. Despite any government interest, however, the applicant may also have property rights. This article contends that the courts should recognize that the applicant has property rights in his unpatented invention which are not foreclosed by either a government claim of a property interest or the government's vesting of either a property or a proprietary interest in the invention.

The courts have not provided clear definitions of an inventor's rights in an invention after he has filed a patent application but before a patent has been granted. The current federal rule, as explained in *Mullins Mfg. v. Booth*,⁶³ is: "The right of [the inventor] . . . to his invention while his application is pending is an *inchoate right*, which matures as property when the patent issues, and it may have great prospective value."⁶⁴ In *Farrand Optical Co. v. United States*,⁶⁵ a federal district court recognized an inventor's unspecified interest in his invention and his right to file a patent application in spite of a classified contract with the government covering the use of the invention. The court found that the attitude of the applicant was important to the characterization of the invention: "Plaintiff's attitude at all times was that of an owner of a valuable property right who was zealously protecting its property."⁶⁶

These opinions conflict with the general principle of trade secret law that a novel idea which has been reduced to practice and is capable of being sold or transferred has recogniza-

62. MANUAL OF PATENT EXAMINING PROCEDURE, *supra* note 18, at § 107.

63. 125 F.2d 660 (6th Cir. 1942).

64. *Id.* at 664 (emphasis added).

65. 175 F. Supp. 230, 249-50 (S.D.N.Y. 1959).

66. *Id.* at 249.

ble value as property.⁶⁷ Federal courts have not applied this rule of trade secrets to patent applications. However, trade secrets is clearly a related area of intellectual property law. The principal that the owner of an idea owns something of value and has analogous rights is supported by case law as far back as 1928.⁶⁸ By comparison, patent decisions have steadfastly refused to recognize value and rights in ideas that are not held to be patentable.⁶⁹ In this author's view, the logic of such decisions is unsound.

These three elements of a trade secret are closely related to the four requirements for patentability. The first element is that the idea must be reduced to practice. Patents must also be reduced to practice before a patent may be filed.⁷⁰ This rule is liberalized to the extent that an application itself is deemed constructive reduction to practice.⁷¹ The element of reduction to practice measures the maturity of the idea and the knowledge of its concrete embodiments.

The second element, capability of being sold or transferred, is a corollary to reduction to practice. Once an invention has been constructively reduced to practice, it may be licensed to others or sold. An actual sale or transfer, which requires an actual market for the idea, is not required. Therefore, any patent application describing a mature idea automatically meets two of the three requirements for trade secret property.

The third element of trade secret property, novelty, is also one of the requirements for patentability.⁷² Trade secrets, however, require a lesser degree of novelty than patents.⁷³ Therefore, a review of a patent application for completeness,

67. R. M. MILGRIM, 2 TRADE SECRETS 8-38 (1967); *Irizarry v. Puente v. President and Fellows of Harvard College*, 248 F.2d 799, 802 (1st Cir. 1957); *Moore v. Ford Motor Co.*, 28 F.2d 529 (S.D. N.Y. 1928), *aff'd*, 43 F.2d 685, 686 (2d Cir. 1930); *Davis v. General Motors Corp.*, 196 U.S.P.Q. 218, 222 (N.D. Ill. 1977); *Miller, Caffey & Co. v. Bristol Meyers Co.*, 184 U.S.P.Q. 306 (N.Y. Sup. Ct. 1974); *Brenner v. Stix, Baer & Fuller Co.*, 352 Mo. 1225, 181 S.W.2d 643, 648 (1944).

68. *Moore v. Ford Motor Co.*, 28 F.2d 529 (S.D.N.Y.), *aff'd*, 43 F.2d 685, 686 (2d Cir. 1930).

69. See *supra* notes 63-66 and accompanying text.

70. See 35 U.S.C. § 102(g).

71. 1 DELLER'S WALKER ON PATENTS § 47 at 210-215 (2d ed. 1964).

72. A patentable invention must be novel, useful, nonobvious, and of patentable subject matter.

73. *Official Airlines Schedule Information Service, Inc. v. Eastern Air Lines, Inc.*, 333 F.2d 672 (5th Cir. 1964).

to establish reduction to practice, which will also imply transferability, plus a review of the invention for trade secret novelty would be a sufficient determination of the inventor's property interest in his application.

The question of an inventor's property interest in an unpatented invention is important, whether or not the government has claimed a property interest in the invention. The Fifth Circuit Court of Appeals considered whether an inventor had any rights in his invention where the government had both possible shop right⁷⁴ and AEA claims in *Hobbs v. United States*.⁷⁵ The court concluded that even if the government had a valid shop right or AEA claim in the invention, "other valuable rights remain the property of the inventor."⁷⁶ This conclusion is significant because the government's claims to Hobbs' invention were initiated after the patent application was filed, but before the patent was granted. Following the *Mullins* rule,⁷⁷ the *Hobbs* court recognized inchoate property rights in the application. The court concluded that the values represented by potential sale and licensing rights, as well as potential royalties from the government, did not exhaust the value inherent in the application.⁷⁸ Therefore, government property rights, based on either NASA or AEA, may diminish an inventor's property rights in his unpatented invention. However, such government property rights do not obliterate *all* property rights in the invention.

Although the *Hobbs* opinion distinguishes individual and government property rights in inventions, its analysis is incomplete. A corollary to the *Mullins* rule is that there can be *no* vested property rights in a patent application. Under this rule, the government should not be able to obtain vested property rights in an application. Reading *Hobbs* and *Mullins* together, the government should only obtain a *vested* interest in an invention after the patent issues. At best, the government's property interest in an unpatented invention can only

74. "The classic shop rights doctrine ordains that when an employee makes and reduces to practice an invention on his employer's time, using his employer's tools, and the services of other employees, the employer is the recipient of an implied, nonexclusive, royalty-free license." *Hobbs v. United States*, 376 F.2d 488, 494 (5th Cir. 1967), citing *Gill v. United States*, 160 U.S. 426 (1896).

75. 376 F.2d 488 (1967).

76. *Id.* at 492, 493.

77. 125 F.2d at 664.

78. *Id.*

be an inchoate property right.

However, this analysis of case law is contradicted in the area of atomic energy. Since 1967, data to which the Restricted Data label of the AEA applies has been recognized as "born classified."⁷⁹ In the atomic energy area, no affirmative action by the interested federal agency is required before the data is classified. Legal scholars have emphasized, that neither the "born classified" concept nor its application to private data are expressly authorized by the AEA.⁸⁰ Further, a proposed AEA regulation which would have expressly embodied the "born classified" concept and criminal sanctions for violation was never promulgated.⁸¹ Therefore, the "born classified" concept applied to data regulated by the AEA remains a policy based on fiction and wishful thinking.

Representative Paul N. McCloskey, Jr. proposed an amendment to the AEA and identified three elements to the "born secret" concept: (1) the classification procedures and policies of the Department of Energy, (2) the ambiguity of the present law as it is interpreted by the Energy and Justice Departments, and (3) increasing public dispersion of scientific data bearing on construction and use of weapons which can destroy mankind.⁸² These factors combine to create an environment where "the government is now depending on the threat of criminal prosecution to force scientists, both government and private, into restraint in the communication of ideas, while conceding that if criminal prosecution were attempted it probably would fail."⁸³ In response, McCloskey's amendment would expressly limit the definition of "Restricted Data" to exclude properly published information, and

79. REPORT, *supra* note 1, at 184. Without ever using the term, the Atomic Energy Commission had, since its inception in 1946, adopted the "born classified" concept as a working assumption. And, although neither the Commission nor the staff acknowledged the presence of the "born classified" concept, it was an underlying thread throughout their deliberations. *Id.* at 178.

80. *Id.* at 184-85.

Among those commenting were: Committee on Atomic Energy; New York City Bar Association; The American Civil Liberties Union; The Atomic Industrial Forum; General Electric Company; Union Carbide Corporation; Allied Chemical Corporation; Esso Research and Engineering Company. Most of the comments from these organizations were related to questions of practicality and administration of the regulation. *Id.*

81. *Id.* at 185-87.

82. *Id.* at 188.

83. *Id.*

remove use of threat as an enforcement tool.⁸⁴ Therefore, the AEA "born classified" policy conflicts with the rule of *Hobbs* and *Mullins*, has no basis in law, and is not enforceable against private data. In AEA cases against private inventors, then, the *Hobbs-Mullins* rule should prevail to eliminate the spectre of a vested government property interest in privately-generated ideas.

A government *claim* to property right in an invention submitted for a patent does not *a priori* deprive the inventor of any property right. If the government claim of right exists without proof of its validity, then the inventor's entitlement to the rights associated with the patent application has not been affected. Only a question of divestiture has been raised. Indeed, *Hobbs* stands for the proposition that even a *proven* government interest in the invention fails to foreclose absolutely the inventor's interest in the invention. If a proven interest fails to exhaust all property claims in an unpatented invention, then an unproven assertion of an interest must foreclose even less.

5. *The Relationship Between Secrecy Orders and Cryptography*

As discussed previously, the media has publicized several instances of government interference in cryptography research.⁸⁵ The interference in cryptography was initiated by the NSA, the agency primarily responsible for cryptography in the United States.⁸⁶ However, cryptography is not covered by either the AEA or NASA. Therefore, cryptography is not subject matter in which the government can claim a property interest. The basis for interference, then, must be that disclosure of information about new developments in civilian

84. *Id.* at 193, 243-44. "Restricted Data" is a term of art, derived from § 2014(11)(g) of the AEA, defined as follows:

all data concerning (1) design, manufacture, or utilization of atomic weapons; (2) the production of specific nuclear material; or (3) the use of special nuclear material in the production of energy, but shall not include data declassified or removed from the Restricted Data category pursuant to section 2162 of this title.

85. See *supra* note 6 and accompanying text.

86. Shapely, *NSA Slaps Secrecy Order on Inventors' Communications Patent*, 201 Sci. 891, 893 (Sept. 1978). NSA's recommendation for a secrecy order on the Nicolai application was supported by concurring recommendations by the Navy and the Air Force, although the Army disagreed.

cryptography poses a threat to the national security. Even though the Secrecy Order Statute does not expressly require more, such an unsupported allegation is a weak basis for an interference as drastic as a secrecy order.

a. *Generally.* Civilian cryptography is not expressly covered by any legislation.⁸⁷ Consequently, the government can claim no property interest in it. Nor is there any statutory basis for government to claim a national security interest in civilian cryptography. However, unclassified information related to design, manufacture or use of munitions are controlled, in the interests of national security, by the International Traffic in Arms Regulations (ITAR)⁸⁸ and the Export Administration Regulations (EAR).⁸⁹ Under the ITAR, civil-

87. Disclosure of codes, ciphers and related tools is regulated by 18 U.S.C. § 798. This section brings the handling and generating of information related to cryptography that the government would like to restrict as classified in the interests of national security under government scrutiny. Three conditions must be satisfied before an activity is subject to control under this section: (1) whether the activity in which the researcher is engaged is cryptography, (2) whether the information handled by the researcher is classified, and (3) whether the government has a legitimate national security interest in the research. Section 798 prescribes criminal sanctions.

The definitions included in § 798 clarify that the section applied only to *existing* government cryptography systems, or systems under government contracts, or by government employees. But any of the wide range of cryptographic systems in use at any given time could be classified on the grounds that "somewhere a related cryptographic system is in use." REPORT, *supra* note 1, at 77 (Letter from Cipher A. Devours to Public Cryptography Study Group June 10, 1980). Section 798 applies to civilian cryptography research and developments only where they duplicate classified codes, ciphers or cryptographic systems developed by the government.

'Cryptography' encompasses signal security and signal intelligence.

The former includes all ways of keeping secret both human messages, such as telegrams and telephone conversations, and electronic messages, such as computer-to-computer data exchanges. These ways include cryptography-varied techniques for putting messages into secret form by code or cipher

Signal intelligence comprises all methods of extracting information from transmissions.

Kahn, *Cryptology Goes Public*, 58 FOREIGN AFF. 141, 144-45 (1979). See also D. KAHN, *THE CODEBREAKERS*, xiii-xvi (1967); Feistel, *Cryptography and Computer Privacy*, SCI. AM., Vol. 288, No. 4, at 15 (May 1973); H. F. GAINES, *CRYPTANALYSIS: A STUDY OF CIPHERS AND THEIR SOLUTIONS*, 1 (1956); Davida, Wells, and Kam, *Security and Privacy*, IEEE COMPUTER SOC'Y INT'L COMPUTER SOFTWARE AND APPLICATIONS CONFERENCE, 2D, PROCEEDINGS (Nov. 13-16, 1978).

88. 22 C.F.R. §§ 121.01-130 (1981).

89. The current EAR, printed at 15 C.F.R. §§ 368-399.2 (1981) are authorized by 50 U.S.C. app. §§ 2402-03 as amended. These regulations are in the process of change, in response to studies conducted, beginning in 1977. Proposals resulting from this study are published in 45 Fed. Reg. 65014-19, 65152-67 (Oct. 1, 1980).

ian cryptography is regulated as "technical data."⁹⁰ Under the proposed EAR, such data is to be regulated as a "military critical technology."⁹¹ Thus, there is some precedent for an interest in the impact of exporting cryptologic information or tools.

All cryptography patents are, therefore, screened by the Patent Office security group for possible national security problems. The apparent scope of Group 220's interest in cryptography includes codes, code receivers, and code transmitters within class 178 and certain teachings within class 35.⁹² Compared to the parameters used by the defense agencies to determine whether the government has a national security interest in the information, these bounds on the government's interest are both accessible and specific. Criteria developed by the Department of Defense and the NSA to de-

90. [T]he term "technical data" means: (a) Any unclassified information that can be used or be adapted for use in the design, production, manufacture, repair, overhaul, processing, engineering, development, operation, maintenance, or reconstruction of arms, ammunition, and implements of war on the U.S. Munitions List; (b) any technology which advances the state-of-the-art or establishes a new art in the area of significant military applicability in the United States; or (c) classified information as defined in § 125.02.

22 C.F.R. § 125.01 (1981). This definition is a unilateral definition by the State Department, unsupported by statute.

91. "Military critical technology" is a new approach to export regulation authorized by the Export Administration Act of 1979 (EAA). The EAA is codified at 50 U.S.C.A. app. §§ 2401-20 (West Supp. 1979), Pub. L. No. 96-72, Sept. 29, 1979, 93 Stat. 503.

Section 2404(d) authorizes the Secretary of Defense to develop a list of "militarily critical technologies," and directs him to emphasize the following: 1) arrays of design and manufacturing know-how, 2) keystone manufacturing, inspection, and test equipment, and 3) goods accompanied by sophisticated operation, application, or maintenance know-how, which are not possessed by countries to which exports are controlled under this section, and which if exported, would permit a significant advance in a military system of any such country.

92. By matching the classes of arts which the Patent Office recognizes as cryptography against the list of classes of arts which the Group 220 searches, the scope of the security group's interest in cryptography is defined as including the following: code receivers, class 178, subclasses 89 and following; code transmitters, class 178, subclasses 79 and following; codes, class 178, subclass 113; and teaching, class 35, subclasses 2 and following. U.S. DEP'T OF COMMERCE, *MANUAL OF CLASSIFICATION* III-13 (rev. perm. ed. 1979); U.S. DEP'T OF COMMERCE, *INDEX TO THE U.S. PATENT OFFICE* 50 (1977).

An "art class" is a category used by the Classification Division of the Patent Office to classify the novel element of the patent application for examination. These categories include all the "useful arts" referred to in Art. I, § 8 of the Constitution. 2 *DELLER'S WALKER ON PATENTS* §§ 174, 175 at 829-30, 843 (2d ed. 1964).

fine which information is possibly detrimental to the national security are, as a general rule, classified.⁹³ Therefore, a prospective applicant for a patent has a difficult time determining whether any potential secrecy order problems exist concerning his application *before* he files for a patent.

b. *Problems with the Present Procedures for Secrecy Orders.* There are several serious defects in the current procedures. The notice of issuance of the secrecy order and subsequent hearing provisions of the Invention Secrecy Act are inadequate to meet the due process requirements of the fifth amendment. The government's monopolization of the information contained in the patent application as a result of the secrecy order appears sufficiently restrictive and capricious to be a taking of property for which just compensation is necessary. Also, the prohibition on disclosure of information contained in the patent application acts as a prior restraint on the applicant's first amendment right to publish such information.

(i) *Denial of fifth amendment due process.* Inventors affected by secrecy orders have claimed that the effect of the Invention Secrecy Act and related procedures constitutes a denial of constitutional due process guarantees. In order to characterize his complaint as a fifth amendment due process claim, a patent applicant must address two issues: (1) whether the government action deprived him of life, liberty, or property, and (2) if such deprivation occurred, then what procedure is due.⁹⁴

Taking of private property. To prove a "taking," the inventor must show: state action, his property interest, and that his property interest was taken by the state action.⁹⁵ On the issue of state action, it is important to notice that patents are purely federal and statutory in nature. The Constitution delegates the power to legislate in the area to Congress. The patent statutes delegate congressional authority to various administrative agencies of the federal government. The secrecy

93. Telephone interview with Samuel Engle, a Patent Examiner for the Group 220 (March 3, 1980). See also Shapely, *Intelligence Agency Chief Seeks "Dialogue" with Academics*, 202 Sci. 407, 409 (Oct. 1978); REPORT, *supra* note 1, at 48.

94. G. GUNTHER, CONSTITUTIONAL LAW 646-69 (10th ed. 1980).

95. U.S. CONST. amend. V "No person shall . . . be deprived of property, without due process of law; nor shall private property be taken for public use, without just compensation."

order is an instrument of the administrative agencies; therefore, interference with property rights by secrecy order is state action.

As discussed above,⁹⁶ an inventor has at least inchoate property rights in his invention before it is patented. These rights are sufficiently far-ranging to prevent a proven government property interest in the invention from depriving the inventor of all property rights in it. The difficult question is whether the secrecy order procedure denies the inventor's property rights in his invention by state action. This question incorporates the more specific question whether the secrecy order procedure is a taking of the inventor's property without the due process of law required by the fifth amendment.

That the secrecy order may be issued without prior judicial review raises the issue whether the secrecy order procedure is a taking of property without due process of law. The Constitution requires that the victim of a taking receive "just compensation."⁹⁷

Eminent domain, the taking of private property for a public use, is a function of the police power of the government. In *Berman v. Parker*,⁹⁸ the United States Supreme Court discussed the definition of police power:

The definition is essentially the product of legislative determinations addressed to the purposes of government, purposes neither abstractly nor historically capable of definition. Subject to specific constitutional limitations, when the legislature has spoken, the public interest has been declared in terms well nigh conclusive.⁹⁹

The courts generally defer to congressional determinations.¹⁰⁰ Moreover, the breadth of the concept of public welfare and the public welfare purpose behind eminent domain causes the courts to review eminent domain legislation with more than the usual deference.¹⁰¹ Secrecy orders are one of two types of eminent domain: public emergency, or impairment of use. In

96. See *supra* notes 75-78 and accompanying text.

97. U.S. CONST. amend. V.

98. 348 U.S. 26 (1954).

99. *Id.* at 32.

100. *Berman v. Parker*, 348 U.S. at 32-33. See also *Day-Brite Lighting, Inc. v. Missouri*, 342 U.S. 421, 424 (1952); *Butcher's Union Co. v. Crescent City Co.*, 111 U.S. 746, 746-55 (1884).

101. *Miller v. Schoene*, 276 U.S. 272 (1928).

public emergency cases, courts generally defer to legislative determinations, but for impairment of use cases, an ad hoc weighing of factors replaces the general rule.¹⁰²

The asserted purpose for limiting disclosure of information in a patent application is the detrimental effect on the national security. This national security interest, whether foreign or domestic, is within the scope of the public's general security interest. The issue remains whether the Invention Secrecy Act's limitation on disclosure is so restrictive that it surpasses mere regulation, and is therefore invalid if compensation is not provided.¹⁰³

As discussed above, eminent domain legislation is reviewed with deference to congressional decisions. The fact that there may be a less onerous alternative is not decisive.¹⁰⁴ Congress' choice of means is presumptively valid.¹⁰⁵

A secrecy order prohibits disclosure of information. This is in many ways analogous to classification of information by a government agency. Although classification of information could result from disclosure of information to the Patent Office in a patent application,¹⁰⁶ the issuance of a secrecy order merely restricts disclosure of the information contained in the application. A secrecy order does not assign the information to one of the classification categories specified in the Classifi-

102. See, e.g., *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393 (1922). The factors include: extent of harm to the private property, usually measured in terms of lost value; benefits to the public, which is a rational relation scrutiny of the fit between the government action and the public interest, with a view to the necessity of the action; whether the government action is use of the property or prohibition of private use; and the average reciprocity of advantage to the burdened property owner, which inspects any benefits he receives by the government action.

103. The Invention Secrecy Act includes a Compensation Statute. 35 U.S.C.A. § 183 (1976). This statute, however, does not provide for compensation in all cases where secrecy orders are imposed.

104. See *United States v. Carolene Products Co.*, 304 U.S. 144 (1938); *Nebbia v. New York*, 291 U.S. 502 (1934). So long as the regulatory legislation bears a real and substantial relationship to the object sought, the legislation will not be found to be unconstitutional.

105. See *De-Tom Enterprises, Inc. v. United States*, 552 F.2d 337, 339 (Ct. Cl. 1977); *Mosca v. United States*, 417 F.2d 1382, 1385-86 (Ct. Cl. 1969), *cert. denied*, 399 U.S. 911 (1970).

In *Constant v. United States*, 617 F.2d 239 (Ct. Cl. 1980), the court recognized that in 35 U.S.C. § 183 the Congress elected to provide for compensation for "considerable conduct outside the range of the just compensation clause of the fifth amendment." *Id.* at 242.

106. See *supra* note 10. A portion of 35 U.S.C. § 181 deals with sealing the patent application.

cation Order, nor does it require proper stamping of the pages and special handling rules as required in the Classification Order. The question is whether the secrecy order's restriction on dissemination of information amounts to a compensable taking.

The Court of Claims considered the issue whether classification of information was a sufficient destruction of property value to be a taking of private property for public use without just compensation in *Radioptics, Inc. v. United States*.¹⁰⁷ The court found that the mere imposition of security restrictions on disclosure of the classified information to others, without a prohibition of use of the information, did not prevent Radioptics from protecting or enhancing the value of the property.¹⁰⁸ Although Radioptics was prohibited from disclosing the detailed contents of its proposal to persons outside Radioptics without prior permission from the Atomic Energy Commission, Radioptics could discuss the process in general terms without restriction. The court held the limitations to be *de minimus* and the purpose behind the AEA to be a proper protection of the public welfare.¹⁰⁹ Such a use of the police power for a proper public purpose does not require compensation under the fifth amendment.¹¹⁰

Comparing the secrecy order to the alleged taking by classification in *Radioptics*, the mere limitation on disclosure imposed by the secrecy order is not a fifth amendment taking which requires just compensation because it is less intrusive than a classification of information.

Although *Radioptics* is authority for the proposition that classification of private information does not constitute a taking, the holding ignores the realities of a classification and a secrecy order. The fact is that a secrecy order substantially inhibits an inventor's ability to enhance the value of his property. Indeed, if enhancement procedures are initiated before a secrecy order is issued, then they must cease after the order

107. 621 F.2d 1113 (Ct. Cl. 1980).

108. *Id.* at 1126-27. The realities of such a prohibition from disclosure appear to have escaped the court's evaluation. *See Id.* at 1129.

109. *Radioptics*, 671 F.2d at 1127. "[W]here the purpose of a regulation which causes interference with property rights is to prevent injury to the public welfare as opposed to merely bestowing upon the public a nonessential benefit, compensation under the fifth amendment is not required." *Id.* The court cites *Franco-Italian Packaging Co. v. United States*, 128 F. Supp. 408, 414 (Ct. Cl. 1955) as authority.

110. *Id.*

is issued to prevent a violation of the order. This is especially true where enhancement procedures are at the point of contract negotiations.¹¹¹ The merit of this contention lies in the inventor's forced inability to disclose details of his invention. No entrepreneur will invest in an unknown product. If an inventor is prohibited, by law, from demonstrating to a potential investor that his invention is superior to a competitive product, it will be impossible to acquire the venture capital needed for the product's development.

In *Constant v. United States*,¹¹² the United States Court of Claims stated that loss proximately caused by the secrecy order must be supported by "real concrete evidence of damage"¹¹³ to be compensable. This rule of actual damages was propounded in light of the inventor's allegation of loss of prospective users by the inability to disclose his invention. The court held such allegations sufficient to state a cause of action for damage caused by the secrecy order.¹¹⁴ Thus, in light of *Constant v. United States*, *Radioptics* is not settled law.

Procedural Due Process. Even where the government regulation of private property is not so severe as to constitute a taking by eminent domain, the individual is still constitutionally entitled to procedural due process. The difficulty lies in determining the appropriate procedures.

Generally, due process includes notice to the individual of the impending deprivation of a right and the opportunity to be heard.¹¹⁵ The Invention Secrecy Act provides for notice to the inventor that a secrecy order has issued, and for subsequent administrative and/or judicial proceedings. It is well settled that the hearing need not precede the deprivation of property or liberty in order to comply with constitutional due process.¹¹⁶ Subsequent hearings may not meet the constitu-

111. REPORT, *supra* note 1, at 21. *Hearings supra* note 1, at 237 (Testimony of Paul Meiklejohn).

112. 617 F.2d 239 (Ct. Cl. 1980).

113. *Id.* at 244.

114. *Id.* The *Constant* case post-dates *Radioptics*.

115. *Goldberg v. Kelly*, 397 U.S. 259, 267-68 (1970).

116. The Court has consistently held that, where there is an adequate procedure for subsequent judicial review, Congress may authorize an administrative agency to regulate in a manner affecting property rights. Such regulatory power is not a deprivation of due process rights. *Fahey v. Malone*, 332 U.S. 245, 253-54 (1947); *Bowles v. Willingham*, 321 U.S. 501, 519 (1944); *Phillips v. Commissioner*, 283 U.S. 589, 596-97 (1931).

tional standard. The hearing must be provided before the final administrative order becomes effective.¹¹⁷ Where no statute expressly provides for a hearing, the right to a hearing is based on the complainant's entitlement to the property or liberty.¹¹⁸ In the context of secrecy orders, entitlement is crucial to the right to a hearing only in cases where a patent is never allowed. Inventors of allowed patents have rights to claim compensation expressly within the Invention Secrecy Act, in the Compensation Statute.¹¹⁹ Entitlement is important to

117. See *Opp Cotton Mills v. Administrator*, 312 U.S. 126, 152-53 (1941).

118. See *Bishop v. Wood*, 426 U.S. 341 (1976); *Board of Regents v. Roth*, 408 U.S. 564 (1972).

119. The Compensation Statute provides as follows:

An applicant, his successors, assigns, or legal representatives, whose patent is withheld as herein provided, shall have the right, beginning at the date the applicant is notified that, except for such order, his application is otherwise in condition for allowance, or February 1, 1952, whichever is later, and ending six years after a patent is issued thereon, to apply to the head of any department or agency who caused the order to be issued for compensation for the damage caused by the order of secrecy and/or for the use of the invention by the Government, resulting from his disclosure. The right to compensation for use shall begin on the date of the first use of the invention by the Government. The head of the department or agency is authorized, upon the presentation of a claim, to enter into an agreement with the applicant, his successors, assigns, or legal representatives, in full settlement for the damage and/or use. This settlement agreement shall be conclusive for all purposes notwithstanding any other provision of law to the contrary. If full settlement of the claim cannot be effected, the head of the department or agency may award and pay to such applicant, his successors, assigns, or legal representatives, a sum not exceeding 75 per centum of the sum which the head of the department or agency considers just compensation for the damage and/or use. A claimant may bring suit against the United States in the Court of Claims or in the District Court of the United States for the district in which such claimant is a resident for an amount which when added to the award shall constitute just compensation for the damages and/or use of the invention by the Government. The owner of any patent issued upon an application that was subject to a secrecy order issued pursuant to section 181 of this title, who did not apply for compensation as above provided, shall have the right, after the date of issuance of such patent, to bring suit in the Court of Claims for just compensation for the damage caused by reason of the order of secrecy and/or use by the Government of the invention resulting from his disclosure. The right to compensation for use shall begin on the date of the first use of the invention by the Government. In a suit under the provisions of this section the United States may avail itself of all defenses it may plead in an action under section 1498 of title 28. This section shall not confer a right of action on anyone or his successors, assigns, or legal representatives who, while in the full-time employment or service of the United States, discovered, invented, or developed the

every case, however, in defining the limits of the right which has been allegedly infringed.¹²⁰ In patent cases, an applicant has entitlement to inchoate property rights, while the person holding an allowance or issued patent is entitled to vested property rights.

The Compensation Statute provides for compensation proceedings, both administrative and judicial, once the patent is in condition for allowance.¹²¹ Thus, the proceeding will follow the issuance of a secrecy order. However, the administrative procedure, which may precede the lifting of the secrecy order, is not expressly required to be a hearing.¹²²

The primary procedure authorized by the Compensation Statute is administrative.¹²³ The applicant has the right to "apply to the head of any department or agency who caused the order to be issued for compensation for the damage caused by the order of secrecy and/or for the use of the invention by the Government."¹²⁴ In *Farrand Optical Co. v. United States*,¹²⁵ the court considered the provisions of the Compensation Statute. The district court found that the Compensation Statute

does not direct that the department or agency shall have a hearing or making any finding, or even that it shall make an award or that it shall make any determination. Such a statute does not provide for administrative determination in the sense in which that word is ordinarily used in requiring a claimant to exhaust his administrative remedies before he turns to the court.¹²⁶

Thus, the provision for filing an administrative claim is insufficient to satisfy the traditional due process hearing require-

invention on which the claim is based.

35 U.S.C. § 183 (1976).

120. *Arnett v. Kennedy*, 416 U.S. 134 (1974) (entitlement limited by procedural requirements of the statute containing the entitlement). See also Van Alstyne, *Cracks in "The New Property": Adjudicative Due Process in the Administrative State*, 62 CORNELL L. REV. 445 (1977).

121. 35 U.S.C. § 183 (1976). A patent is "in condition for allowance" once an examiner agrees with the applicant that his invention is patentable. This is a determination of status that precedes the granting of the patent. Reynolds, *The Standard of Invention in the Patent Office*, DYNAMICS OF THE PATENT SYSTEM (1960) 5.

122. See *supra* note 119.

123. 35 U.S.C. § 183.

124. *Id.*

125. 133 F. Supp. 555 (S.D. N.Y. 1959).

126. *Id.* at 558.

ments. Nor is the additional statutory provision for review of the administrative action adequate to cure the deficiencies of the administrative claim procedure.

These deficiencies result from a statutory focus on compensation in both the administrative procedure and any review of such procedure. Validity of the administrative action, withholding or delaying the patent, is not an issue, nor is validity considered on review.¹²⁷

Congress, however, never intended the administrative procedure to be the sole recourse of an applicant victimized by a secrecy order. The Compensation Statute provides for both judicial review of the administrative claim and original jurisdiction in the Court of Claims for compensation suits initiated by the patent owner on whose application a secrecy order had been issued.¹²⁸ Although jurisdiction in the Court of Claims does not arise until the date of issuance, which follows the date of allowance, this jurisdiction extends to all patentees affected by secrecy orders. The requirement that issuance be delayed does not apply to these court suits.¹²⁹ Because the procedure is judicial, it must meet fifth amendment due process standards. Therefore, although the administrative claim procedure provided is inadequate to protect the inventor's rights to a timely subsequent hearing on the administrative action of a secrecy order, the statutory provision for suit in the Court of Claims without a prior administrative claim satisfies fifth amendment due process requirements.

In spite of the above provisions, there remains a possible class of applicants who were victims of secrecy orders, but whose right to seek compensation for damages is not addressed in the Compensation Statute. The statute only acknowledges claims for compensation submitted by persons whose patents have been allowed or issued.¹³⁰ Thus, those inventors whose applications were subject to secrecy orders but whose patent applications were later rejected do not expressly

127. In order to have standing to file an administrative claim, the inventor must have had a secrecy order issued on his application, and this secrecy order must have caused delay in the issuance of his patent. 35 U.S.C. § 183 (1976), *construed in* Constant v. United States, 617 F.2d 239, 241 (Ct. Cl. 1980). A delay of even one day would be sufficient to satisfy this condition. *Id.* at 243 n.10.

128. 35 U.S.C. § 183 (1976).

129. 617 F.2d at 243.

130. 35 U.S.C. § 183; Constant v. United States, 617 F.2d at 243.

have standing to seek compensation for damages.

Recognizing that it is possible for a nonpatentable invention to be subjected to a secrecy order, the Patent Office promulgated a rule¹³¹ providing procedures for handling applications which are rejected while under secrecy orders.¹³² This rule provides that further prosecution¹³³ of such rejected applications, if appealed or otherwise not abandoned, will not be heard until the secrecy order is lifted. Final rejection of a patent application, however, is not sufficient to cause the secrecy order to be lifted. Thus, an invention may remain in the control of the Patent Office and defense agencies, through the vehicle of the secrecy order, even though a patent examiner has rejected the application for nonmeritorious claims. A final rejection will generally be based on the merits of the claims, rather than on technical flaws in the application. By implementing the Secrecy Order statute in a manner which does not require the secrecy order to be lifted following a final rejection of the application, the Patent Office allows the defense agencies to retain control over inventions which are either obvious, not patentable subject matter,¹³⁴ not new, or not useful, or a combination of these factors.

One available ground for rejection of a patent application is obviousness. An invention may be obvious if it is found to

131. 37 C.F.R. § 5.3 (1981), reprinted in 35 U.S.C.A. § 188 (West Supp. 1981), provides:

Unless specifically ordered otherwise, action on the application by the Office and prosecution by the applicant will proceed during the time an application is under secrecy order to the point indicated in this section:

(a) National applications under secrecy order which come to a final rejection must be appealed or otherwise prosecuted to avoid abandonment. Appeals in such cases must be completed by the applicant but unless otherwise specifically ordered by the Commissioner will not be set for hearing until the secrecy order is removed.

132. *Id.* Generally, a final rejection does not occur until the second office action, or later. The final rejection is a final judgment on the merits of the claims of the application. Prosecution of the application may continue after a final rejection in the form of interviews or amendments, but the scope of prosecutions is greatly diminished. 5 DELLER'S WALKER ON PATENTS, § 454, at 403-09 (2d ed. 1972).

133. 37 C.F.R. § 5.3. Prosecution of a patent application is generally an *ex parte* procedure. Prosecutions may go to matters of substance or form of an application, and usually both are involved. Generally, a prosecution will take the form of either a written office action from the Patent Office or a written reply from the applicant. 5 DELLER'S WALKER ON PATENTS, *supra* note 132, at § 454, at 389, 391.

134. Some examples of inventions which are not statutory patentable subject matter are computer software and mathematical formulae.

be either totally within the prior art¹³⁵ or obvious to one skilled in the applicable art. The patent laws protect such information from a limited monopoly on the theory that such information is property within the public domain.¹³⁶ If an invention under a secrecy order is rejected on the grounds of obviousness, the government agency which caused the secrecy order to issue would have an extremely difficult time proving to a court how disclosure of the information in such an application could be detrimental to the national security. To allow government agencies to request issuance of secrecy orders on information which is sufficiently public to be unpatentable stifles useful research. This is contrary to the purposes of the patent laws as stated in the United States Constitution.

Government control of an invention which has no utility probably generates no harm. The attributes of obviousness, nonpatentability of subject matter and lack of novelty, however, are all symptomatic of inventions which are within the public domain. A public idea cannot be controlled by a single individual. The government should not be able to exact licenses or penalties for the use of ideas which are concededly public.

The Invention Secrecy Act operates on the presumption that if a patent never issues, or is never allowed, then the applicant who has received a secrecy order on his invention has suffered no actionable harm.¹³⁷ The presumption is conclusive as to applicants whose patents are rejected. A conclusive presumption, when embodied in a statute, is an attempt to legislate a fact that cannot be proven in actuality.¹³⁸ In *Mobile, J.*

135. *DELLER'S WALKER ON PATENTS*, *supra* note 132, at § 454 at 360-89. The term "prior art" is not defined in the patent statutes. The term ranges broadly to include patents (including co-pending and foreign patents, but not including abandoned applications), printed publications, public uses and sales, common knowledge in the art, or any knowledge publicly available whether or not used by others.

136. *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273 (1976); *Anderson's-Black Rock, Inc. v. Pavement Salvage Co., Inc.*, 396 U.S. 37 (1969); *United States v. Adams*, 383 U.S. 39 (1966); *Graham v. John Deere*, 383 U.S. 1 (1966).

137. 35 U.S.C. § 183 (1976). An applicant cannot seek compensation for damage caused by the secrecy order unless and until the patent is in condition for allowance.

138. *Henner v. Donnan*, 285 U.S. 312, 329 (1932). "This court has held more than once that a statute creating a presumption which operates to deny a fair opportunity to rebut it violates the due process clause of the Fourteenth Amendment." *Id.*

"Nor is it material that the Fourteenth Amendment was involved in the *Schlesinger* case [270 U.S. 230 (1926)], instead of the Fifth Amendment, as here. The restraint imposed upon legislation by the due process clauses of the two amendments is the same." *Id.* at 326.

& *K. R. Co. v. Turnip Seed (Turnip Seed)*,¹³⁹ the Supreme Court discussed legislative presumptions. Due process requires that there be a rational connection between the facts of any given case and the facts presumed, and that there be no unreasonable inferences. The legislative presumption "must not, under the guise of regulating the presentation of evidence, operate to preclude the party from the right to present his defense to the main fact thus presumed" ¹⁴⁰ The presumption that no harm results when a secrecy order is issued to an applicant whose patent is rejected denies such an applicant the chance to present his defenses to the legislative presumption. Under *Turnip Seed*, this constitutes a denial of due process. Where serious injury to an individual results from government action whose "reasonableness depends on fact findings, the evidence used to prove the [g]overnment's case must be disclosed to the individual so that he has an opportunity to show that it is untrue."¹⁴¹ This rule, expounded by the Supreme Court in *Green v. McElroy*,¹⁴² is not suspended because some of the evidence in the government's case is classified. An individual retains his right to examine the evidence detrimental to his case and to have a meaningful opportunity to be heard.¹⁴³

For such applicants who may not sue under the Compensation Statute, but who have suffered "serious injury" as a re-

139. 219 U.S. 35 (1910).

140. *Id.* at 39.

141. *Green v. McElroy*, 360 U.S. 474, 496 (1959).

142. *Id.*

143. The courts have approved *in camera* inspection of evidence claimed to be sensitive or classified for the administrative claim procedures that can commence before the secrecy order is lifted. *Halpern v. United States*, 258 F.2d 36, 43-44 (2d Cir. 1953). One problem with such administrative procedures, however, is the lack of personnel at the low levels that the defense agencies prefer to have handle the claims who have security clearances sufficient to review the classified material. REPORT, *supra* note 1, at 14-15. Although similar *in camera* proceedings might be required where agencies still claim protection for their secrecy order criteria, the judicial proceedings in the Court of Claims should generally be free from such problems, since the right to sue accrues after the secrecy order is lifted. *Constant v. United States*, 617 F.2d 239, 243 (Ct. Cl. 1980). Presumably, one whose application is rejected would be required to wait until the secrecy order on his application is lifted before suing in any court.

In addition, the right to a meaningful opportunity to be heard in court where no alternative forum is empowered to settle the dispute was approved by the Supreme Court in *Boddie v. Connecticut*, 401 U.S. 371 (1971).

sult of government actions,¹⁴⁴ the problem is finding a court that has jurisdiction of both his cause of action and the defendant. Some solutions to this jurisdiction problem are discussed below.¹⁴⁵

A final due process problem remains for those who seek compensation for damages caused by the secrecy order. On its face, the Compensation Statute gives equal weight to suits for damages caused by the secrecy order and damage caused by governmental use of the invention.¹⁴⁶ The courts, however, have placed a higher burden of proof on a claim for damages caused by the secrecy order than on the use claim.¹⁴⁷ This judicial interpretation is in error. The federal courts are actually legislating from the bench when they interpret statutory language in such a manner that, although two groups are on an equal footing, the due process rights of one group are preferred over the due process rights of the other.

(ii) *Denial of first amendment freedom to publish: Parameters of protected speech.* As a prohibition on dissemination of information, the secrecy order appears to act as a prior restraint on publication, thereby violating the first amendment. A prior restraint is government action which restrains expression before a court determines that the speech is unprotected.¹⁴⁸ Although traditionally a prior restraint is an injunction issued by a court and enforced by the court's contempt powers, there are other forms of prior restraints. One commentator, after recognizing four classes of prior restraints, concluded that the most serious form of prior restraint is that which entrusts the restraint of communication to an executive official.¹⁴⁹ The secrecy order is clearly an example of such restraint. The authority to restrict communication of the contents of the application is entrusted to the Commissioner of

144. *Green v. McElroy*, 360 U.S. 474, 496 (1959).

145. See *infra*, notes 184-199 and accompanying text.

146. 35 U.S.C. § 183 provides for "compensation for the damage caused by the order of secrecy and/or for the use of the invention by the Government."

147. See *Clift v. United States*, 597 F.2d 826 (2d Cir. 1979); *Halpern v. United States*, 258 F.2d 36 (2d Cir. 1958); *Farrand Optical v. United States*, 197 F. Supp. 756 (S.D. N.Y. 1961); *Gearon v. United States*, 115 F. Supp. 910 (Ct. Cl. 1953), *cert. den.* 348 U.S. 942 (1955); REPORT, *supra* note 1, at 6-8.

148. Emerson, *The Doctrine of Prior Restraint*, 20 LAW. & CONTEMP. PROBS. 648 (1956); Mohaghan, *First Amendment "Due Process"*, 83 HARV. L. REV. 518 (1970).

149. Emerson, *The Doctrine of Prior Restraint*, 20 LAW. & CONTEMP. PROBS. 648, 655-60 (1956).

Patents and the heads of defense agencies.¹⁵⁰

No court has determined whether a patent application is protected speech.¹⁵¹ There are several possible characterizations of the patent application. Patent applications have educational value for others who do not care to duplicate the research. In addition, Vice Admiral Bobby Inman, former head of the NSA, has characterized the patent application as commercial in nature. The patent protects the inventor's rights while he makes a profit selling the invention to others.¹⁵² As educational speech, the application would be protected by the academic freedom concepts within the first amendment.¹⁵³ As commercial speech, the application would receive lesser protections.

In order to examine the protections afforded the patent application in the worst case, and since less protection is afforded commercial speech, this article assumes that a patent application is commercial speech. As commercial speech, the application is subject to certain first amendment protections. In *Central Hudson Gas v. Public Service Comm'n*,¹⁵⁴ the Supreme Court developed a four-part analysis to determine whether or not a government regulation unconstitutionally restrains commercial speech. First, if the expression is not misleading and the activity is lawful, the speech may be protected by the first amendment.¹⁵⁵ Second, the interest asserted by the government must be "substantial."¹⁵⁶ If both these tests are met, the court then must determine whether the regulation "directly advances" the asserted government interest and whether the regulation is "more extensive than is necessary to

150. In actual practice, the defense agency heads delegate the responsibility downward. The result is that low-level administrators, without review by their superiors, determine the agency's national security interest in various inventions. REPORT, *supra* note 1, at 10-11.

151. REPORT, *supra* note 1, at 26; *Hearings*, *supra* note 1, at 268-84. (Memorandum for John M. Harmon, Assistant Attorney General, Dept. of Justice, to Dr. Frank Press (May 11, 1978)).

152. Shapely, *Intelligence Agency Chief Seeks "Dialogue" with Academics*, 202 Sci. 407 (October 1978). Inman contrasted a profit motive to a pure academic interest that could be satisfied by publication in an academic journal. *Id.*

153. The problem of a secrecy order as a prohibited interference in academic freedom is discussed in Comment, *Patent Secrecy Act of 1952*, 15 COLUM. J.L. & Soc. PROBS. 359, 387-389 (1980).

154. 447 U.S. 557 (1980).

155. *Id.* at 564.

156. *Id.*

serve that interest.”¹⁵⁷

Under the four-part *Central Hudson* analysis, a patent application is protected commercial speech. First, the activity is lawful. Further, the information in the patent application is required to be complete and truthful to meet the requirements of utility and candor.¹⁵⁸ Thus, the application is not misleading. Second, there are substantial government interests, including property and national security interests. Property interests, because authorized by statute, are either substantial or nonexistent, depending on the subject matter of the application. The national security interest, as the government's interest in protecting its sovereignty, has been called “the highest duty of every nation.”¹⁵⁹ Therefore, the national security interest is substantial. Because the government interest is substantial, the second prong of the *Central Hudson* test is satisfied. *Central Hudson* requires, however, that where the government has a valid interest in regulating truthful commercial speech, the regulations must be narrowly drawn.

The last two prongs present issues regarding the secrecy order procedure. The third prong of the *Central Hudson* test provides that the statute may not be overly broad.¹⁶⁰ There are three kinds of overbreadth inherent in the secrecy order. First, the tight time limitation imposed by Title 35 for applying for licenses to file and for filing in foreign countries¹⁶¹ en-

157. *Id.* at 564-70.

158. 35 U.S.C. § 112 (1976). *See also* 37 C.F.R. § 1.56(a) (1979) which provides:

A duty of candor and good faith toward the Patent and Trademark Office rests on the inventor, on each attorney or agent who prepares or prosecutes the application and on every other individual who is substantively involved in the preparation or prosecution of the application and who is associated with the inventor, with the assignee or with anyone to whom there is an obligation to assign the application. All such individuals have a duty to disclose to the Office information they are aware of which is material to the examination of the application. Such information is material where there is a substantial likelihood that a reasonable examiner would consider it important in deciding whether to allow the application to issue as a patent. The duty is commensurate with the degree of involvement in the preparation of the application.

159. *Dennis v. United States*, 341 U.S. 494, 519-20 (opinion of Justice Frankfurter concurring) (quoting the Chinese Exclusion case, 130 U.S. 581, 606 (1889)).

160. 447 U.S. at 565.

161. The Patent Cooperation Treaty, Pub. L. 94-131, 94th Cong.; 89 Stat. 685, provides reciprocal treatment for patents filed by nationals of cooperating countries and generally requires filing of applications outside the United States within 12 months of the U.S. filing date, according to article 22 of the Treaty.

courages the defense agencies to recommend that the Patent Office issue secrecy orders on applications where the threat to the national security is only questionable.¹⁶² During the first six months after filing, the inventor needs a license to file in any foreign country.¹⁶³ If a secrecy order does not issue on an application within six months after its filing date, then the applicant does not need a license for foreign filing of his application.¹⁶⁴ Second, the absence of a determination of patentability before issuance of a secrecy order allows government control of unpatentable, public domain inventions. This practice creates a class of victims of secrecy orders who are denied compensation for damages proximately caused by secrecy orders. Third, the absence of a definition of national security in the Act allows low level agency personnel to make policy determinations concerning the degree of threat posed by various areas of new technology in the private sector. To create procedures sufficiently narrow to satisfy the *Central Hudson* requirements, subsequent sections of this article suggest changes to the current secrecy order procedures.

Central Hudson finally provides that the Secrecy Order statute and related procedures are unconstitutional if the means chosen by Congress do not directly advance the asserted interests in property and national security.¹⁶⁵ Academicians and individuals conducting research in cryptology have expressed concern that the current procedures work against both the public and the national interest.¹⁶⁶ They argue that in areas where technological advances are marketable, the free enterprise system produces a product superior to that produced by government. When the government, in addition to working against the free enterprise system, is working in secrecy, the results are presumed to be inferior to that demanded by an interested market.¹⁶⁷

162. See REPORT, *supra* note 1, at 86-87. The policy of agency officials entrusted with implementing the secrecy order procedure is to err on the side of national security where the decision whether to issue the order is questionable.

163. 35 U.S.C. § 184 (1977).

164. *Id.*

165. 447 U.S. at 564.

166. See Robertson, *NSA Breaks Code Silence*, Electronic News (Jan. 22, 1979), at 14, col. 1.

167. Similar concerns are currently being considered by Congress in relation to the Atomic Energy Act and its effect of transforming inventions to which it is applicable to the status of having been "born classified." See Sanders, *Data Privacy: What*

The problem of determining whether the Act and agency procedures directly advance the asserted national security interest is compounded by the lack of guidelines within the statute. National security is not defined.¹⁶⁸ No criteria are specified in the Act. Individual defense agencies have discretion to determine the parameters of the appropriate national security interest. These agencies have an unlimited mandate to act, but no mandate to provide due process. The fact that the legislature could have defined "national security" leads to the conclusion that the Act fails the *Central Hudson* test, despite the fact that there is a substantial government interest present. Therefore, the patent application is protected speech.¹⁶⁹

Facial violation and violations by application. A statute may violate the first amendment either because it is void on its face or because it is improperly applied. An inventor may violate the terms of the secrecy order and raise the defense that the Invention Secrecy Act is facially void because it is both unconstitutionally overbroad and impermissibly vague. An inventor may also assert that the statute is facially valid but improperly applied. However, the general rule is that a challenger must comply with a facially valid statute, even if invalidly applied,¹⁷⁰ unless he was not able to obtain prompt judicial review of the administrative action enforcing the statutory restraints.¹⁷¹

Applying the general rule to the secrecy order, an inventor expecting to challenge the validity of the law need not comply with the law. This is due to the fact that there is no judicial review of the secrecy order until both the order is lifted and the patent is issued, events which may follow issuance of the order by several years.¹⁷²

An inventor who wishes to obtain prompt judicial review of the secrecy procedures may choose between procedures based on the Federal Civil Rights Act or federal question jurisdiction discussed below. The immediately available proce-

Washington Doesn't Want You To Know, REASON Jan. 1981, 24, 34-35; REPORT, *supra* note 1, at 120-72.

168. See 35 U.S.C. § 181.

169. 447 U.S. 557, 561-66 (1980).

170. *Poulos v. New Hampshire*, 345 U.S. 395 (1958).

171. *Id.* at 420 (Frankfurter, J., concurring); *Shuttlesworth v. City of Birmingham*, 394 U.S. 147, 155 n.4 (1969).

172. 35 U.S.C. § 183.

ture of petitioning the Commissioner of Patent for rescission of the order¹⁷³ is insufficient to meet the standard of judicial review. Furthermore, the administrative compensation claim procedure, available when the patent is allowed, is neither sufficiently prompt nor sufficiently within the fifth amendment due process requirements to meet the standard.¹⁷⁴ Therefore, in order to challenge either the facial validity or the application of the secrecy order procedures, an inventor may violate the terms of the secrecy order and await commencement of action by the Justice Department. Of course, this procedure is available only if a suit in federal district court under the Federal Civil Rights Act or federal question jurisdiction is not promptly available.

Balancing of individual first amendment rights with national security. In the case of a secrecy order issued on an invention, the judicial resolution of the inventor's prior restraint claim involves a balancing of the individual's first amendment rights of free speech and freedom to publish against the government's interest in national security. This issue was first decided by the Supreme Court in *New York Times Co. v. United States* (the Pentagon Papers case.)¹⁷⁵ The Court, in a plurality decision, denied the government's right to prevent publication of a Pentagon study relating to Viet Nam and a defense department study relating to the Tonkin Gulf incident by the New York Times and the Washington Post. The government argued that it was acting within the military security exception to the general prohibition against prior restraint.¹⁷⁶ However, in view of the heavy presumption against prior restraints, the Court found that the government had not met the burden of justifying the restraint. The rule from the Pentagon Papers case¹⁷⁷ is that, in

173. 37 C.F.R. § 5.4 (1979) (now codified at 35 U.S.C.A. § 188 (West Supp. 1979)). This petition for rescission of the secrecy order must precede an appeal to the Secretary of Commerce, as provided by 35 U.S.C. § 181. See 37 C.F.R. § 5.8 (1979), now codified at 35 U.S.C.A. § 188 (West Supp. 1979).

174. 35 U.S.C. § 183.

175. 403 U.S. 713 (1971).

176. 403 U.S. at 714. The military security exception derives from dictum in *Near v. Minnesota*, 283 U.S. 697, 716 (1931). The list of illustrative permissible "exceptional cases" include: (1) restraints during wartime to prevent disclosure of military deployments or obstruction of military effort; (2) enforcement of obscenity laws; and (3) enforcement of laws against incitement to acts of violence or revolution.

177. Each of the nine Supreme Court Justices wrote an opinion in this case. The rule proposed as being drawn from the decision places more emphasis on the

order to maintain its injunction, the government must overcome the heavy presumption against prior restraints and show an immediate, irreparable and *certain* harm of such compelling nature that a court must protect the interest of the nation and the people over the individual right to publish freely.¹⁷⁸

The issue was addressed several years later in *United States v. The Progressive*.¹⁷⁹ The district court reviewed a government application for prior restraints promoting national security under the AEA. Comparing the interests involved in publishing information about H-bombs to the interests involved in publishing classified historical studies of United States decision-making in Viet Nam, the court held that a different rule should apply where the government's prior restraint is not based on a federal statute.¹⁸⁰ In a weak analysis, the court rejected the Pentagon Papers rule. Reasoning that denial of the government's injunction would result in the publication of technical information about an instrument for mass destruction of human life, the court held that the "disparity of the risk" attendant to each possible ruling was sufficient to allow the court to conclude that the government had met its burden of proof in the case.¹⁸¹

Reading the Pentagon Papers and *The Progressive* cases together, a new rule emerges pertaining to conflicts between national security and freedom of the press. First, because of the general presumption against prior restraint, the government must meet an unusually heavy burden to establish the validity of prior restraint in any case. Where the government's injunction is not predicated on a statute, the government must show an immediate, irreparable, inevitable and direct harm to the nation or its people to be proximately caused by the publication. Where the injunction is predicated on a stat-

reasoning of the Justices who expressed an attempt to balance the interest of the government in national security against the private right to publish than on the extreme opinions. Two of the Justices found that prior restraints were proper in this case. 403 U.S. 713 at 714-17, 719 (Black, J., concurring); *Id.* at 720 (Douglas, J., concurring); *Id.* at 748-52 (Burger, C.J., dissenting); *Id.* at 752-59 (Harlan, J., dissenting); *Id.* at 759-63 (Blackmun, J., dissenting) (1971) (*per curiam*).

178. 403 U.S. 713, at 726-27 (Brennan, J., concurring); *Id.* at 730 (Stewart, J., concurring); *Id.* at 733 (White, J., concurring). See *Near v. Minnesota ex rel Olson*, 283 U.S. 697, 716 (1931).

179. 467 F. Supp. 990 (W.D. Wis. 1979).

180. *Id.* at 994.

181. *Id.* at 996-97.

ute, the government must show all elements required by the statute to comprise a violation. The government's case in the second situation is strengthened by showing a great disparity in the competing interests at stake.¹⁸²

The secrecy order is a procedure to limit disclosure based on a federal statute. Where this prior restraint is subjected to judicial review, the government must meet the heavy burden of showing the validity of the restraint. Where the government property interest in the invention is supported by a federal statute, *e.g.*, the Atomic Energy Act or the NASA, the government's burden to establish the propriety of the restriction is lessened. The presumption of validity which appends every act of Congress places a limited presumption of validity on government action taken pursuant to such laws. On the other hand, where the government property interest in the invention is not supported by a federal statute, as is the case with civilian cryptography research, the government must meet a heavy burden of showing that the particular activity it seeks to restrain is one which Congress subjected to government restraint under the statute authorizing a national security interest. Where the government can show a "disparity of risk"¹⁸³ in the various results possible from granting or denying the restraint, the government has perhaps strengthened its case. Judicial determination of the existence of a disparity of risk ideally should be on a case-by-case basis to allow differences in inventions to aggravate or mitigate possible harms.

III. RELIEF FROM PROCEDURAL PROBLEMS OF THE INVENTION SECRECY ACT.

The injuries suffered from the issuance of a secrecy order have been identified in terms of constitutional torts. Constitutional causes of action generally provide a more effective basis for breaking through the barrier of sovereign immunity. The inventor must be able to fit his case within the four corners of a federal statute which allows an individual to sue the federal government or its agencies for the torts identified. Only two bases for jurisdiction appear to be available to the inventor whose right of action under the Invention Secrecy Act has

182. See *Hearings, supra* note 1, at 242-57 (Prepared Testimony of H. Miles Foy, Senior Attorney-Advisor, Department of Justice).

183. 467 F. Supp. at 996.

been denied: The Federal Civil Rights Act and federal question jurisdiction.

A. *Federal Civil Rights Action.*

Recognizing that some valid tort and constitutional claims were being denied recognition in courts because they fell either within the discretion exception or the intentional torts exception to the Federal Tort Claims Act,¹⁸⁴ the United States Supreme Court, in *Butz v. Economou*,¹⁸⁵ acknowledged the applicability of 42 U.S.C. § 1983¹⁸⁶ to suits against federal officials. The *Economou* decision settled the split in the lower federal courts,¹⁸⁷ and held that a federal official, acting within "the outer perimeter of [his] line of duty,"¹⁸⁸ is entitled to absolute immunity from common law torts, but for constitutional torts the court may look to both the statutory scope of his authority and the actual nature of his duties to determine if he is entitled to either qualified or absolute immunity.¹⁸⁹

The Court looked to two elements of a violation to determine the degree of immunity to which a defendant is entitled: the scope of the official's duty and the scope of the official's authority. The rule of *Economou* is:

the conduct charged must not only be within the scope of the official's duty, but also within the scope of his author-

184. 28 U.S.C. §§ 2680(a), 2680(h) (1976). The discretion exception is the largest loophole. This exception allows government employees who commit torts while exercising discretion as required by their duties of employment to be immune from prosecution.

185. 438 U.S. 478 (1978).

186. Every person who, under color of any statute, ordinance, regulation, custom, or usage, of any State or Territory, subjects or causes to be subjected, any citizen of the United States or other person within the jurisdiction thereof to the deprivation of any rights, privileges, or immunities secured by the Constitution and laws, shall be liable to the party injured in an action at law, suit in equity, or other proper proceeding for redress.

42 U.S.C. § 1983 (1976).

187. Compare *Felder v. Daley*, 403 F. Supp. 1324 (S.D.N.Y. 1975) and *J.D. Pflaumer, Inc. v. United States Department of Justice*, 450 F. Supp. 1125 (E.D. Pa. 1978) with *Norton v. Turner*, 427 F. Supp. 138 (E.D. Va. 1977) and *Briggs v. Goodwin*, 569 F.2d 10 (D.C. Cir. 1977).

188. *Barr v. Matteo*, 360 U.S. 564, 575 (1959).

189. The Supreme Court recently reaffirmed this rule in *Davis v. Passman*, 442 U.S. 228 (1979). See Comment, *Executive Immunity for Constitutional Torts after Butz v. Economou*, 20 SANTA CLARA L. REV. 453 (1980) [hereinafter *Executive Immunity*].

ity for an absolute immunity to arise. When the conduct is within the scope of duty but without authority, only a qualified immunity exists.¹⁹⁰

The Court stated that "a qualified immunity from damages liability should be the general rule for an executive official charged with constitutional violation,"¹⁹¹ but continued its analysis of various duties, choosing to extend an absolute immunity to officials whose duties are "quasi-judicial."¹⁹²

Applying the rule of *Economou* to the secrecy order situation, the determinations of a government property interest in the invention and a government national security interest within the appropriate federal guidelines are not part of an administrative agency hearing. Indeed, the lack of an administrative hearing or adjudication of damages and the lack of guidelines for determining a national security interest are harms for which the patent applicant seeks relief. Therefore, no potential defendants could have performed duties which the *Economou* Court would consider sufficiently quasi-judicial to invoke the protection of absolute immunity. At best, the official would be able to claim a qualified immunity, which would lessen his liability for damages.

However, a plaintiff must meet his burden of proof under Section 1983. He must (1) point to his constitutional rights which have been violated, (2) show that the defendants were acting under color of law in so depriving him of these rights, and (3) show that each defendant knew of or reasonably should have known that he was acting outside the law. Of these requirements, the last is perhaps the most difficult to prove. Although something less than scienter is required, a commentator has interpreted court decisions to require a showing of personal blameworthiness¹⁹³ rather than that the deprivation of constitutional rights was the result of the ac-

190. 52 TEMP. L.Q. 102, 115 (1979). This casenote rephrases the Court's language in *Butz v. Economou*, 438 U.S. 478 (1978).

191. 438 U.S. at 508.

192. *Id.*, at 508-17. Specifically, the Court states that judges, federal administrative hearing examiners, agency prosecutors, and agency attorneys should be entitled to absolute immunity to ensure the integrity of federal administrative hearings as quasi-judicial procedures.

193. *Executive Immunity*, *supra* note 189, at 461. M.A. FRANKLIN, INJURIES AND REMEDIES: TORT LAW AND ALTERNATIVES 672 (2d ed. 1979). Scienter is not required since the action is in tort rather than for criminal sanctions. But plaintiff must prove the defendant's state of mind, since the tort is intentional.

tions of the official being sued. Blameworthiness is even more difficult to prove in a case where the act, done according to a statute, has never been successfully challenged for constitutional deficiencies.¹⁹⁴ Proof of a defendant's state of mind in a Section 1983 suit will be difficult because the Act has never been successfully challenged on constitutional grounds. However, potential problems involved in successful litigation of a Section 1983 suit are rendered less foreboding by the availability of an award of attorney's fees to a prevailing plaintiff.¹⁹⁵ This provision for attorney's fees could make Section 1983 a more attractive basis for jurisdiction, if the blameworthiness condition can be met.

B. *Federal Question Jurisdiction.*

An applicant who has suffered constitutional harms due to a secrecy order issued on his application is entitled to bring an action under 28 U.S.C. § 1331.¹⁹⁶ This statute provides for jurisdiction of federal district courts in suits against the federal government, any federal agency, or any employee of the United States acting in his official capacity for harms arising under the Constitution or federal statutes. Federal officials and employees may be able to claim official immunity in a federal question suit if the district court finds that the federal employee acted with subjective good faith and with objective reasonableness.¹⁹⁷ Even if the court finds that the federal employee acted capriciously or arbitrarily, the federal defendant may still be entitled to immunity.¹⁹⁸

194. M.A. FRANKLIN, *INJURIES AND REMEDIES: TORT LAW AND ALTERNATIVES* 684-86 (2d ed. 1979). Lack of notice to a government official that an action results in deprivation of constitutional rights can be characterized as "innocent mistake of law." Whether harm intentionally inflicted, but under an innocent mistake of law, is covered by 42 U.S.C. § 1983 is an open question. The Supreme Court avoided this issue in *Procunier v. Navarette*, 434 U.S. 555 (1978).

One commentator reads *Wood v. Strickland*, 420 U.S. 308 (1975), as authority for the view that ignorance of the law is no defense where "objective circumstances indicate that the official *knew or should have known* that constitutional rights were being violated." *Executive Immunity*, *supra* note 189, at 461 (emphasis added).

195. 42 U.S.C.A. § 1988 (Supp. V 1980).

196. 28 U.S.C.A. § 1331(a) (West Supp. 1979). The 1976 amendment to this section eliminated the \$10,000 jurisdiction amount for federal question suits.

197. *Chaudoin v. Atkinson*, 406 F. Supp. 32 (D.C. Del. 1975).

198. *Id.* at 35-36.

IV. SUGGESTED AMENDMENTS

This article thus far has focused on statutory interpretation and on recognized causes of action. The article now projects forward, proposing amendments to the existing law and rules.¹⁹⁹

As the secrecy order laws apply to civilian technology, which is covered by either the AEA or the NASA, the presumption of validity that accompanies acts of Congress validates the current legal mechanisms. The provisions for review, hearing and compensation are provided for separately in the AEA²⁰⁰ and the NASA,²⁰¹ as well as in the Invention Secrecy Act. These Congressional acts clearly define the government interest in the information contained in such patent applications. The provisions for takings, under the Atomic Energy Act,²⁰² at least, have been held valid in the face of constitutional challenge.²⁰³

Where the defense agencies have no statutory property interest in an invention, procedures should require a determination of the property status of the invention before a secrecy order may issue on it. The problems begin when government agencies assert an interest in an invention on the basis of the national security, because that term is not defined by an act of Congress. Immediately, the presumption of the validity of the agency's interest is less than the interest defined by the AEA or the NASA. The government's burden of proving a valid national security interest in the information is not increased proportionately. Where the national security interest claimed by a defense agency on an invention not covered by the AEA or the NASA is not clearly defined by an act of Congress, the Patent Office and the defense agencies should exercise great care to ensure that the individual's property rights in his application are not violated. The rules regulating implementation of the secrecy order laws should provide for determinations of public ownership of inventions on which an

199. The House Committee on Government Information and Individual Rights held hearings on the patent secrecy order laws during the first half of 1980 with the intent of amending the existing procedures for implementing the laws. See REPORT, *supra* note 1; *Hearings, supra* note 1.

200. 42 U.S.C. §§ 2181(a) and (b), 5817(d) (1976).

201. 42 U.S.C. §§ 2457, 2458 (1976).

202. 42 U.S.C. §§ 2274(b), 2280 (1976).

203. *United States v. The Progressive*, 467 F. Supp. 990 (W.D. Wis. 1979).

agency wants a secrecy order to issue *prior to* such issuance. In particular, the agencies should not treat the inventor's application in a manner which would be a taking should a patent issue. This denies the inventor his due process rights to claim compensation and review of the agency action.

As discussed previously, the inventor's property rights are recognizable under a rule analogous to that used in trade secret law, if the idea is reduced to practice, transferable, and novel.²⁰⁴ Therefore, rather than resolving the entire issue of patentability before issuing a secrecy order, the interested agency should require a resolution of the novelty of the idea in order to establish the agency's liability to an inventor for an incautiously issued secrecy order. Where the idea is not novel, issuance of a secrecy order on it is unsupportable. Such an idea is not for the government to control because it is already in the public domain. Where the idea is novel, however, it is not yet public, and therefore may be controlled. In addition, government control of the idea is an infringement of the inventor's rights in the idea, so the agency must be prepared for a compensation suit if it interferes with these property rights.

In addition to a determination of the novelty of an invention, the Patent Office should be required to determine, during the first six months after filing, whether an invention concerns patentable subject matter. The case law interpreting the applicable code sections is extensive and well-developed. Six months is not an unreasonable limit for this application of statutory and judicial guidelines. The general rule for subject matter is that laws of nature are not patentable.²⁰⁵ Laws of nature are by definition obvious and public. Although an element of discovery is inherent in natural laws, the element of discovery does not make them less public. Clearly, the dual determinations of patentability of subject matter and novelty can serve to establish the inventor's property rights in the invention and to foreclose government control of ideas, without interfering with the statutory goal of protecting the national security. These two limitations eliminate the most abusive in-

204. See *supra* notes 67-73 and accompanying text.

205. *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972). See also *Parker v. Flook*, 437 U.S. 584 (1972) (a method for updating alarm limits during catalytic conversion processes, in which the only novel feature was a mathematical formula, was held to be not patentable under § 101 of the Patent Act).

stances of secrecy order issuance by requiring the government to recognize a minimum value in the invention before gaining control of it. The recognized minimum also serves as a baseline evaluation of the invention that an applicant may use in a suit to gain compensation for the issuance of the secrecy order.

Where the defense agencies have no statutory property interest in an invention, procedure should require approval, by a neutral magistrate, of the agency's probable national security interest in the invention before issuance of a secrecy order. Imposition of criminal penalties for violation of a notice of restriction, issued pursuant to a statute, violates the Supreme Court's decision in *United States v. United States District Court*,²⁰⁶ as well as the fourth and fifth amendments, where the agency has seized information in the patent application by mere issuance of a secrecy order notice without having satisfied a neutral magistrate that the elements of a criminal offense are *probably* present.²⁰⁷ Such a change in procedure would provide for review of the agency action. This review would ensure a proper government purpose for imposing restraints. Among the criteria which a magistrate should require the agency to meet are: (1) a determination of novelty of the invention, (2) a recognition, by the interested defense agency, of the value of the information in the application, (3) identification of the specific national security interests that might be adversely affected by disclosure of the information in the application. *In camera* hearings may be required, since the identification of the defense agency's interest will probably involve disclosure of classified information.

This requirement of an *ex parte* pre-issuance hearing necessitates a delegation of responsibility for issuance of the secrecy order. *The Act should expressly delegate responsibility for the issuance of such orders either to the defense agency, who must bear the burden of damages, or to the Patent Office, which currently claims no responsibility, or to both jointly.* Currently, a patent applicant must apply to the defense agency responsible for issuance of the secrecy order for damages.²⁰⁸ Although no responsibility is actually attributed

206. 407 U.S. 297 (1972).

207. U.S. CONST. amend. IV ("no warrants shall issue, but upon probable cause, supported by oath or affirmation, . . .").

208. 35 U.S.C. §§ 181, 184-85 (1976).

by this procedure, the Act should expressly delegate such responsibility. This change would end the current finger-pointing confronting an applicant who seeks just compensation damages.

Further, Congress should create guidelines for determining when the national security is threatened in a patent application. Inclusion of such guidelines in the statute would create tighter boundaries within which the agencies could operate and simplify judicial evaluation of secrecy order cases.

In order to make the Invention Secrecy Act consistent with the holding of *United States v. United States District Court*,²⁰⁹ the Secrecy Order Statute should be more sharply focused. Where the government has a congressionally determined property interest in the information, the national security interest has been identified with sufficient specificity. Of course this assumes that the laws which grant the property interest are consistent with the Constitution.

Where the government has no such statutory property interest, the Secrecy Order Statute should expressly require a national security interest in relation to foreign governments. *The secrecy order should be more closely tied to the concern with exportation of information expressed in other sections of the Invention Secrecy Act.*²¹⁰ *Either the statute or the rules which regulate enforcement should explicitly exclude issuance of secrecy orders solely on a domestic security interest.* Where the concern is exportation of information, domestic exploitation of the information need not be denied. Control of the information on a domestic market should not be tied automatically to licensing information for foreign markets. Congress has the power to legislate such a tying arrangement but the eminent domain provisions of the Constitution have not given Congress the right to do so. Where the identifiable security interest which the government agency seeks to protect with a secrecy order is a domestic security interest, the restraints imposed by the secrecy order are improper and violate the first amendment rights of the inventor.

Congress should amend the Invention Secrecy Act to require administrative hearings on the issue of propriety of the agency action as well as on the issue of compensation. Such a

209. 407 U.S. 297 (1972).

210. See 35 U.S.C. §§ 182, 184-86 (1976).

provision would invoke the procedural guarantees of the Administrative Procedure Act.²¹¹ The APA, in adjudicative hearings, allows written pleadings in most cases, including compensation claims,²¹² but requires that such hearings produce a written record and a decision based on the testimony submitted to the agency and made available to the opposition for rebuttal. The procedure would be similar to the "paper hearings" held by the Environmental Protection Agency. The option of a hearing before an administrative judge, however, would be available before the option of a hearing in the Court of Claims at the time of issuance of the patent. The resultant written records would make an in-depth review of the administrative actions possible. An agency interested in protecting its position in the compensation hearings will be encouraged to record both its actions and its reasons for acting in opposition to the current policy, rather than delaying and concealing evidence. The openness required by APA procedures would prevent abusive implementation of the secrecy order procedures.

V. CONCLUSION

The Invention Secrecy Act was originally drafted to provide a period of government review of patent applications for consideration of problems of exportation of information to foreign markets, especially application for foreign patents. However, the government defense agencies have used the Act as a tool for controlling the availability of certain classes of information *within* the United States. The government agencies designed rules and procedures for implementing the Act which inflict constitutional torts on patent applicants. As currently implemented, the secrecy order laws act as a prior restraint on the applicant's first amendment freedom to publish. Further, this prior restraint has many indicia of a taking of private property. Therefore, the procedures should be subjected to scrutiny for capricious and arbitrary implementation. Abusiveness which properly requires compensation is especially a problem where a secrecy order is issued and then lifted within weeks or months after its issuance. Many appli-

211. Pub. L. No. 404, 60 Stat. 237-44 (1946); Pub. L. No. 89-554, 80 Stat. 378 (1966) (codified at 5 U.S.C. §§ 551-59 (1976)).

212. 5 U.S.C. § 556(d) (1977).

cants, however, are denied the right to seek compensation and so are denied their due process rights. Unfortunately, judicial interpretations have largely supported current procedures which deny rights of individuals and favor the agencies. These interpretations contravene the plain language of the Act.²¹³

To cure this denial of rights, the proposals would make the agency procedures more visible and more subject to review than they have been in the past. For each secrecy order issued there should be an agency that takes the responsibility for the issuance, that obtains prior judicial approval of the restraint, from whom the applicant may claim damages, and whose decision the applicant may have reviewed.

The time is ripe for amendment of the patent secrecy order laws and procedures. Realizing this, the House Committee on Government Information and Individual Rights held hearings on the patent secrecy order laws during the first half of 1980 and recommended amendments to the existing procedures for implementing the secrecy order laws. Unless the basic constitutional problems of the current system are cured, the government defense agencies will be able to continue to subvert, to their own purposes, the patent laws which the Framers of the Constitution intended to benefit the general public.

213. Of all the secrecy orders initiated during World Wars I and II, before the Invention Secrecy Act was enacted in 1945, only 29 administrative claims for compensation have been filed with the Department of Defense. Of these, 13 were settled by the DOD, one was the subject of a Congressional relief bill, 10 were denied, and 5 were pending as of December 1980. REPORT, *supra* note 1, at 6. In essence then, the right to compensation is illusory.

